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Clinical Lectures.

ACUTE MENINGITIS IN CHLIDREN.

By William T. Plant, M.D.
Professor of Diseases of Children in Syracuse University, Syracuse, N.Y.

Gentlemen: — Our topic for to-day is *Acute Meningitis*, one of the most formidable of all the diseases of early life. You will find it described in some of your books under the name of acute hydrocephalus, but while it may be of use to you to remember the fact, I hope you will not use that term. It served a good purpose once, but now that we have a better knowledge, it should give place to the more appropriate name of meningitis.

Of this disease there are two distinct varieties—the *tubercular* and the *simple*. The former, being much the more frequent, merits our first and chief attention.

Acute tubercular meningitis is an inflammation preceded and caused by a tubercular deposit within the cranium. Examination after death reveals the tubercles, not aggregated into masses as they so often are in the lungs and other organs of the adult, but as minute grayish bodies of pin-head size, or perhaps a little larger. They may be very numerous, or they may be so small and sparse as to be found with difficulty. The severity and duration of the illness seem to bear little or no relation to their numbers.

You might fairly suppose from the name meningitis, that all the membranes, dura-mater, arachnoid and pia-mater share alike in the tubercular deposit and in the resulting inflammation; but it is not so. With few exceptions—and I am not quite sure that there are any exceptions—the granulations are in and upon the pia-mater and here the brunt of the inflammation expends itself. Nor do the tubercles scatter themselves over the whole expanse of this membrane. Search for them on the convexities of the hemispheres and you will rarely find them; but lift the brain from its bed and examine its base and you are at once rewarded. Here, between the optic commissure and the medulla oblongata you will find the granules in varying numbers. Often you will discover them in the processes of pia-mater that are sent down into the sulci between the convo-

lutions. The membrane is also apt to be thickened by an opaque grayish infiltration.

Besides the tubercles and the infiltration you will find some of the attendants and results of inflammation, as hyperæmia of the membrane and perhaps of adjacent parts; flakes of lymph and often serum and pus; and frequently adhesion, so that when the membrane is peeled off it brings some of the brain substance with it. The inflammation may have invaded to some extent the brain itself causing a change in its color and texture. It is common to find the fluid of the lateral ventricles somewhat augmented; occasionally the increase amounts to a quarter of a pint or more.

Quite generally, though not always, this condition is associated with tubercle in other parts of the body, especially the peritoneum and the lungs.

Whatever may contribute to produce a tubercular diathesis in a child may become a cause of this disease. Heredity is a chief cause. The offspring of consumptive and scrofulous parents are very liable to it. Impure and confined air, want of healthful exercise and insufficient food and clothing are powerful contributory causes. The recession of moist cutaneous eruptions, is thought by some to be a cause. Whether it is so or not, I have no doubt that there is some connection between the disappearance of such eruptions, especially if about the head, and this disorder.

Symptoms.—Dr. Robert Whytt, of Edinburgh, who first described this malady, divided it into stages, and his example has been followed by many writers since his day. Not that there are distinct stages with sharply defined boundary lines; you are not to look for that; but rather for a gradual succession of symptoms answering to the progressive character of the complaint.

With this understanding we will follow the usual course and consider first, a stage of invasion. From the stand-points of diagnois and treatment professional interest centres in this stage. He is a skillful diagnostician who, in the half revealed and inconstant phenomena of the first days, can unerringly recognize the foe he has to meet; and it is only at this time that there is any hope of success from medical treatment.

You are called then to see a child between one and seven or eight years old; for this malady, like many others, is rather infrequent during the first year and after the eighth or tenth year, there is greater liability to pulmonary phthisis than to meningitis. Perhaps the parents may have noticed that for some weeks or months the child has been losing appetite, weight and color; that it has been easily fatigued and easily fretted, and that it has been inclined to sadness and drowsiness. More than likely, however, these prodromal symptoms, if present at all, have not been sufficiently marked to attract

notice. The patient does not strike you as being very ill, but it has lost its usual animation and sprightliness. It finds little amusement in its toys. If old enough it may complain of headache; if not so old it may manifest its discomfort by occassionally carrying its hand to its head. Sometimes the headache is so severe, even in these early days, as to force an occasional cry from the child. It is apt to reel in walking, and it may be observed sometimes to come to a sudden pause and look around as if frightened or bewildered. If lying down it may cry out that it is falling and beg to be taken up. These symptoms are doubtless due to vertigo. It inclines to drowsiness through the day, and may lie for hours when the room is quiet and darkened in a half-sleeping state. It is petulant if disturbed, and when questioned replies in monosyllables, if, indeed, it replies at all. Its very silence is ominous of the coming storm. It prefers darkness, or at least twilight to light, instinctively turning its face away from the bright lamp or uncurtained window. Often, the eyes are of an unnatural brightness and the pupils contracted. The hearing also may be so acute that loud noises are very distressing. The temperature is somewhat raised; the pulse is probably increased in frequency and the appetite is impaired, if not lost. Constipation is an early symptom commonly attending the whole course of the disease, excepting, possibly, the last days. It is apt to be obstinate, requiring a cathartic or a clyster for every movement. In a few instances meningitis has been known to begin with a flux, but this is of short duration and is followed by constipation.

Another early and rather persistent symptom is vomiting. Though it is not in most cases very often repeated, it may be so frequent as seriously to interfere with nutrition. It does not usually attend the latter part of the disease, and is often absent after the third or fourth day. I would have you note the fact that vomiting is not present in every case, as has been asserted by some writers. Barrier found it absent in about-one-fifth of the cases observed by him, and I have seen several in which it was altogether wanting.

Though the temperature of the body is somewhat increased, the face is commonly paler than natural. Now and again red spots appear on the cheeks, forehead or ears, to fade away after an uncertain time; or streaks of redness move across the pale features as fleecy clouds move over the face of the moon.

The mental faculties are not usually disturbed until the disease has made considerable progress.

In most cases certain retinal changes observed by the ophthalmoscope will help to establish an early diagnosis. These are hyperæmia and œdema of the optic papillæ; tortuous and gorged retinal veins, and the appearances characteristic of optic neuritis.

Such are the ordinary initial symptoms of tubercular meningitis. Not

all of them are present in every case and no one of them is specially characteristic. Many times the mistake has been made of pronouncing it remittent or typhoid fever. But before a week has passed the symptoms become so characteristic as to compel a correction of the diagnosis if previously in error.

The inflammation is now under full headway. The headache increases. Children who are old enough often cry out, "Oh, my head! my head!" Sometimes the pain is referred to the back of the head or to the ears, and sometimes, curiously enough, to the abdomen. Many writers have alluded to a retraction of the abdomen as one of the symptoms, but it is not, I am sure, always present.

Some patients utter a peculiar, solitary cry or squeal that is so characteristic as to have received the name of "meningitic cry." It seems to me to be denotive of sudden darting pain in the head.

A singular phenomenon was, I think, first described by the great Trousseau and called by him the "*meningitique tache.*" If you draw your finger over the surface of a patient ill of this disease, a red mark often follows that lasts for several seconds and then fades. This symptom does not, however, belong exclusively to meningitis, nor is it present in every case, and it is not, therefore, of very great diagnostic value. Whenever it is present it would suggest, like the alternating flush and pallor, an irregular and aberrant action of the force governing the capillary blood supply.

The tendency to stupor and somnolence increases. In sleep the eyeballs are often turned upwards and the pupil is hidden beneath the half-closed lids. There may also, by this time, be a squint of one or both eyes, and frequently the sight of one is larger than that of the other.

When awake, the child is oblivious as to its surroundings. At one time there may be a steady, fixed gaze into vacancy and an obstinate silence, giving place, if disturbed to a spiteful look and a petulant cry; at another, an active, garrulous delirium.

Both the pulse and respiration now present significant phenomena. The former is slow and irregular. A pulse that in health would run from eighty-five to a hundred may fall to seventy or lower. Often it is intermittent, and it may be regularly or irregularly so. A lack of uniformity as to strength is another characteristic; now strong and energetic in its beating, then suddenly becoming weak and flickering. You may now and then meet with a case where the pulse is not less frequent than usual, but only intermittent and unequal.

The breathing, too, is characterized by irregularity. Sometimes it ceases for a moment and then starts in with a hurried gasping as though the function was conscious of time lost. Sighing and yawning are common symptoms. These peculiarities of pulse and respiration are doubtless due to the fact that the roots of the pneumogastrics are involved in the inflammation.

I have alluded to the squinting often witnessed at this period, but other muscles than those of the eyes are compelled to unwonted and distorting contraction. Muscular twitchings are very common and may be so severe as to interfere with sleep. A quiver may sometimes be observed to run over the whole body. Often there is a tonic muscular contraction giving rise to stiffening of the limbs and trunk. The muscles at the back of the neck are especially liable to be so affected and, in consequence, the head may be drawn far backward. For the same reason the features may be drawn into ludicrous or frightful grimaces. In severe cases there may be, at this period, general convulsions.

Day by day the somnolence increases, merging at length into coma so profound that the infant cannot be roused, though it may still, at frequent intervals, fetch a deep sigh and utter the lonely, harrowing "cri meningitique." This signals the advent of what has been called the third stage, when the symptoms are mainly those of compression of the brain. General and special sensibility become abolished. The pupils, before contracted, are now dilated, often unequally so, and unresponsive or slowly responsive to light. The strabismus continues. The eye-balls, no longer moistened by winking, lose their transparency, while flakes of lymph collect on the margins of the lids and at the inner canthi. The tongue becomes dry and the lips and gums are dark and encrusted. Paralyses of various parts and degrees occur. Often one leg lies extended and powerless while the other is kept in more or less constant movement. Paralysis of the sphincters is not uncommon in the last days, causing leakage of urine and an annoying looseness instead of the previous constipation.

The circulation and respiration now assume new features. The pulse, lately slow and irregular, increases in frequency, reaching, it may be, a hundred and sixty or eighty, but becoming constantly more feeble and indistinct. The breathing, though commonly somewhat later, becomes correspondingly rapid, reaching before death sixty or eighty inspirations a minute and becoming very noisy from tracheal and bronchial rales.

In the last days sudden muscular contractions or twitchings are still frequent and general spasms are more imminent than at any previous period. The face becomes livid and the body bedewed with a profuse perspiration. The coma deepens, the pulse fades away at the wrist; respiration grows more noisy and labored, so that the struggle is painful to witness, though the infant is known to be insensible to suffering. In some cases the temperature becomes very high before death, from 106° to 110°; in others it falls even below the normal.

It is related by many writers that in rare instances the child suddenly comes to itself, looks about, recognizes friends and perhaps speaks to them. But their reviving hopes are doomed to disappointment—for it soons falls back into a condition of hopeless coma.

The ordinary duration of tubercular meningitis is between ten and twenty-one days, but it may be so violent as to kill the little one in two or three days or so mild that it lingers for months.

The prognosis is the gravest possible. So few cases of recovery have been put on record that these have been considered as open to a suspicion of a mistaken diagnosis. It is true that trivial disorders of digestion may give rise to symptoms simulative of meningitis. Some time ago I saw a case of this description in Marcellus with my friend, Dr. Henry W. Post. So marked were the head symptoms in this boy that I was led to make a diagnosis of meningitis. But a brisk cathartic and a few doses of bromide were followed by speedy and permanent amendment. Probably there have been recoveries after proper *early* treatment. But, when the disease is well under way, I believe there is no hope; so little, at any rate, that you are fully warranted in giving an unfavorable opinion.

Treatment.—Up to a recent period the methods pursued with acute meningitis were more than heroic; they were cruel. Local and general bleedings, large blisters to the scalp and calomel, sometimes in enormous doses—these were the agents employed to overcome and expel the demon. But they never did it and most of the profession now advocate more humane if not more successful procedures.

If you are so clever as to recognize the disease at its invasion, there is a little chance of success. The child should be kept quiet in a darkened room and shielded from occasion of annoyance and fretfulness. The diet should be as nutritious as the patient will take. Milk, cream and animal broths are best. A hot foot-bath fortified with mustard has an excellent effect in relieving the cerebral hyperæmia and I would use it as many as four or five times in the twenty-four hours. The feet and legs should be kept warm by bottles of hot water or other means. Cold should be applied to the head, and I know of no better method than the use of cloths wrung from iced water and often changed. I think bladders of ice to the naked scalp of a little child, as some have advised, are too depressing. If used at all, some thick substance, as a fold of flannel, should be interposed between the ice and the head. Correct constipation by such laxatives as are agreeable and easy of administration, but be chary of much physic, for the chances are not made better, but rather the worse by hyper-catharsis. About the only remedy that seems to have anything in its favor as making for recovery is potassium iodide. Its use in this disease was suggested by Rœser in 1840 and it has since been largely used. Considerable evidence for it has now been offered, recoveries having been reported by West and Niemeyer and other accurate observers. It may be given in doses of from two to five grains three or four times a day. I would not wait for symptoms of effusion, but would give it as soon as I suspected the character of the malady.

To relieve the headache and to control muscular spasm and convulsions, bromide of potassium is probably our best remedy. It may be given in the same doses as the iodide and repeated, if necessary, as often as every second hour. I have sometimes found it of service to combine chloral with the bromide in order to lessen spasmodic movement and secure rest. The quantity of this to be given will vary with the patient. I have usually been able to secure my ends with two or three grains, but in one little boy nothing less than ten grains would answer. Valerian in fluid extract or other form will also be found of service in relieving the general restlessness and the tendency to muscular spasm. Hitherto I have said nothing of opiates. In general they are not very well borne because they increase the cerebral congestion, yet I have met with cases where nothing but opiates would relieve the extreme agony.

By the early and persistent employment of such means as these you may possibly save your patient, and then in your surprise you will probably ask yourself whether your diagnosis has not been erroneous.

The prophylactic treatment of tubercular meningitis promises more than the direct. To prevent so terrific a malady is better than to cure it, even if we could cure it. A child with inherited tuberculosis or scrofulous tendencies should be well looked after, especially if it begins to lose flesh and spirit and to exhibit those indistinct and growing evidences of poorliness that are so often precursory to this disease. Cod-liver oil should be given—a half teaspoonful or more three times a day. The diet should be nutritious, the best that can be digested. Stimulants are in order, bourbon or brandy, with milk. Mild exercises in the open air, that interest and amuse without fatiguing the patient, should be provided. Change of air and scene, as from the city to the country, is often of service. If there are humid eruptions about the head and face do not attempt to "dry them up" by local applications, but rather let them disappear of themselves as they probably will do if you can secure an improvement in the general condition.

Simple Meningitis.—I shall have little to say to you about this form, since it is scarcely, if at all, more frequent in children than in adults, and you will hear about it from the Chair of Practice. It is apt to be less regular in its course than the other variety and when it comes from an injury or from the extension of inflammation from other structures, as from the ear, we may have almost at once symptoms of the fully developed disease. Such cases frequently pursue a very rapid course, running their length in forty-eight, thirty-six or even twenty-four hours. Severe convulsions may usher in the disorder and these may be again and again repeated. The inflammation is not, as in the tubercular form, confined to the base, but spreads, in most cases, over the convexities of the hemispheres and upper surface of the cerebellum.

The percentage of recoveries is considerably greater in this than in the

tubercular form. Unfortunately the cure is sometimes marred by permanent defects of mind or special sense. The treatment of this form is not essentially different from that of the other, but may be undertaken with more hope of success. Here potassium iodide has won for itself proud laurels. I would give it early and perseveringly while not neglecting cold to the head, warmth to the extremities and the other measures recommended for the tubercular form.

Original Articles.

THE SURGICAL TREATMENT OF PROLAPSUS UTERI.

By Horatio R. Bigelow, M.D., Washington, D.C.

It is to be regretted that there should be such a multiplication of long words descriptive of operations, nearly all of which are based upon the same general principles, for the relief of a prolapsus or procidentia due to any cause whatever. There are at least ten distinct procedures devised for the relief of this condition which may be classed as follows:

1. Anterior-elytrorhaphy.
2. Posterior-elytrorhaphy, or posterior colporaphy of Simon.
3. Colpoperineoraphy of Hegar.
4. Kolpoperineoplasty of Bischoff, of Bale.
5. Le Fort's median colporaphy.
6. Lateral and bilateral elytroraphy.
7. Episio-perineoraphy or contraction of the vulva and perineum.
8. Stricture of the vagina.
9. Episiorrhaphy or contraction of the vulva.
10. Obliteration of the vulval ring.
11. Huguier's operation, or amputation of the cervix.

Primarily and strictly speaking, prolapsus means the descent of the uterus as a whole. But owing to a faulty nomenclature, and to that adherence to terminology, a respect for which has been enforced by age, we include under one general head; 1. A simple descent. 2. Hypertrophic elongation of the infra-vaginal cervix. 3. Hypertrophic elongation of the supra-vaginal cervix. The language is faulty since it disregards the fundus uteri, and is merely predicted upon the assumption that the *os tincæ* are found to be lower down than in the normal condition. The simple prolapsus found in old maids of a certain age, due to senile atrophy, and to the general decrepitude of advancing years, may also be met with in younger women as a resultant of various causes. Since we are concerned chiefly with surgical intervention, it is scarcely pertinent

to the subject, however interesting such a discussion might be, to consider the patho-anatomy of these three subdivisions.

Anterior Elytroraphy.—This is the favorite practice of American surgeons because cystocele usually complicates *procidentia uteri.* Marion Sims' first operation consisted in a V shaped incision of the mucous membrane of the anterior wall of the vagina, the apex being near the neck of the bladder and the two arms extending upon the sides of the cervix uteri. The two denuded surfaces were then brought together by silver sutures passed transversely. He has since modified this plan so that now in place of making the suture after having denuded a large oval surface of the anterior vaginal wall (as in his first attempts) he dissects off a portion of mucous membrane in the form of a trowel, so as to form a true fold, the upper ends of which, when brought into contact, form a support for the cervix. To remedy the defects of the simple V incision, which consisted in the formation of a pouch, so that the cervix slipped behind the septum into the pouch, and the fundus became fixed in the hollow of the sacrum, Dr. Emmet simply denuded the vaginal mucous membrane in a line across the cul-de-sac, making a regular triangle with its apex at the neck of the bladder and its base at the cervix. Emmet completes the triangle by denuding the strip which in Sims' trowel-shaped denudation, is left untouched at the upper end of the triangle. Dr. T. G. Thomas and Dr. Dawson remove the entire mucous membrane enclosed within the triangle. Dr. Dawson catches up an inch or more of the mucous membrane with a tenaculum to one side of the cervix, and removes with Emmet's curved scissors a piece in the shape of a cone. This serves as an outline. After the entire surface within the triangle is removed silver sutures are passed immediately below the denuded surface entering and emerging about one-fourth of an inch from the edges and introduced first at the upper end of the triangle. After these sutures are passed, the denuded surface is folded with a sound so as to bring its opposing faces together. In this way the wire is folded within the tissues so that the sutures act as splints in keeping the vaginal fold in position and the denuded surfaces in apposition. In 1869 Emmet adopted the following method. The uterus is first anteverted and its neck crowded up into the posterior cul-de-sac by a sponge probang. He then endeavors to find two points, one about half an inch from the cervix on each side and a little behind the anterior lip, which can be drawn together in front of the uterus by means of a tenaculum in each hand. When two such points can be thus brought together without undue tension, the surfaces are to be freshened. Then a surface about half an inch square is to be denuded with scissors about the point of the other tenaculum. Next a similar surface is to be freshened about the point of the first tenaculum, and a strip afterwards removed from the vaginal surface, in front of the uterus, about an inch long, by half an inch wide. Beneath each of these freshened

surfaces a needle armed with a silk loop, to which the silver wire is twisted, is passed, so that the three surfaces are brought together in front of the cervix forming a fold. Courty depresses the posterior wall and perineum by a Sims' speculum, and fixes in the anterior lip of the cervix the two terminal ends of a catheter, the convexity of which depresses the anterior vaginal wall toward the bladder—the curve of the catheter is buried under the lateral folds formed by the mucous membrane, where they meet in the median line. He then passes a solution of nitrate of silver over these folds and afterwards one of salt, which whitens them and allows him to make out exactly the surface to be denuded. The artificial support of the uterus is not secured so satisfactorily by anterior as by posterior elytroraphy or the colporaphy of Simon. Then, too, the operation is by no means an easy one and requires exceedingly delicate manipulation.

Posterior Colporaphy.—Devised by Simon of Heidelberg. He dilates the vagina by means of a broad fenestrated speculum, and then removes with scissors or bistoury, a portion of the mucous membrane and subjacent tissue to within about an inch of the vaginal insertion of the neck. The upper extremity of the denuded surface should be almost square, and not pointed, so that after cicatrisation has taken place, there is a kind of bag above the cicatrix which receives and retains the cervix, without this precaution, as stated by Courty, "the cervix would penetrate into the narrowed canal, would insinuate itself like a wedge, and by gradually dilating it would eventually make its way through it and reproduce the prolapsus." Below, the posterior portion of the labia must be denuded, so that by uniting them, the elongated perineum is produced forward "forming a curve terminated by a spur which forms an extended *point d'appui.* The opposite edges are brought together by sutures, and thus a firm cicatrical band is formed which occupies almost the whole length of the posterior vaginal wall. Prof. Simon claims for his operation; That it forms a pouch in which the cervix rests; that a firm barrier is by it opposed to the exit of the uterus at the point toward which that organ naturally gravitates, and that the vagina is made narrower and more rigid. In addition the uterus is not drawn down by the contraction of the cicatrix as occurs in Sims' operation. (Barnes).

Colpo-perineoraphy (Hegar).—Hegar narrows the vagina by removing a V-shaped fold of mucous membrane from the posterior vaginal wall, the apex reaching nearly to the cervix, the base ending at the vulva, which it includes, as in rupture of the perineum. The paring has to be done very carefully, and it is sometimes difficult to decide just how much mucous membrane from the posterior vaginal wall should be taken off. Hegar gives six to seven centimeters in one direction, and seven centimeters in the other. He also uses the radiating stitch.

Kolpoperineoplasty of Bischoff.—A tongue shaped flap is separated in the direction upward, and each edge of it is united by sutures to the posterior edge of the ordinary lateral denudation, after healing of the wound the lower part of the vagina is considerably narrowed, and the vaginal axis is broken so as to form an angle with the axis of the uterus. The two factors, it is claimed, prevent the womb from protruding through the vagina.

Median Colporrhaphy. (*Le Forts' Operation.*)—The uterus being outside of the uulva, a portion of mucous membrane is dissected off each of the vaginal walls from the middle part (six centimeters long and two wide, according to Courty) the uterus is reduced sufficiently to bring into contact the uterine extremities of these two denuded surfaces, and three sutures are applied to this transverse border, uniting the anterior and posterior vaginal walls in a linear direction. The union of the lateral borders is effected afterwards by forming a metallic thread on each side, first through the border of the anterior denuded surface, and then through the corresponding border of the posterior surface; a thread being placed in the same way on the opposite border and at the same height, it suffices to fasten these two sutures, in order to increase the reduction of the uterus by bringing the opposite vaginal walls together.

Eustache of Lille modifies this operation by removing the mucous membrane at least four centimeters in length and as much in width so that the wound may be nearly square. He also uses catgut instead of silver wire for sutures.

Dr. A. H. Smith uses long deep stitches of silver wire inserted in sound tissue on one side of the anterior denuded surface completely under the latter, then out and under the posterior denuded surface in the same way. The loop of the stitch is now passed through a perforation in a soft metal bar and shotted. The remaining stitches are passed in a similar manner, the loops of each being passed through a perforation in the bar and shotted. The ends of the sutures are twisted and left long.

Hewitt's Operation.—One plan of Dr. Hewitt's is to remove a triangular strip of mucous membrane about two inches broad below, and about half an inch broad above, from the floor of the vagina, the upper end and apex of the triangle being quite close to the os uteri. The ordinary perineal operation is then performed. His other plan is to remove *two* triangular strips from the vaginal canal, one on each side of the vagina, then follow it with the perineal operation. The edges are brought into apposition by means of silver wire, an ordinary short curved needle such as is used in vesico-vaginal fistula being used to carry it. He uses the ordinary *post mortem* stitching which acts as a splint stitch.

The Method of Dr. Savage.—Dr. Savage entered the perineal cavity by removing the mucous membrane upward along the floor of the vagina,

but he relies on deep sutures for securing coaptation. This only differs from Simon's operation in the stitching—Simon using the ordinary stitch.

Dr. Gillette has operated successfully by passing stitches under the mucous membrane without denuding it, by simply condensing the walls of the vagina.

Dr. Schröder denudes the whole surface of mucous membrane within an oval, and buries the sutures in the submucous tissues across the whole face of the wound.

Mr. I. Baker Brown's Operation was devised to meet those cases in which there was a deficiency of perineum from laceration. He denuded the posterior wall of the vagina an inch above the raphé of the perineum, and up the sides of the orifice two-thirds of the inner surface.

Lateral and Bilateral Elytroraphy are indicated, perhaps, in an exceptionally broad vagina.

Episiorrhaphy or contraction of the vulva, is done by uniting the posterior three-fourths of the labia majora—the labia minora being removed, the vivified edges are united by wire sutures.

Obliteration of the Vulval Ring.—This may be done by infibulation as practiced successfully by Schieffer in 1856, Aran did four cases in 1859, result not known.

Martin's Operation.—Martin aims at restoring the posterior columns of the vagina. He makes raw surfaces on the posterior wall, and a raw surface around the introitus. The opposing edges are united in the vaginal wall. The denudation resembles an anchor with a double stock. The surfaces on the stock being brought into apposition on each stock separately.

Huguier's Operation.—Marion Sims has said, that, as a rule conoid amputation should only be made when there is hypertrophic elongation of the intra vaginal portion of the cervix as well as procidentia and supravaginal hypertrophy. Courty holds the same opinion. The operation consists in removing a part or the whole of the cervix with the upper extremity of the vagina, by scooping it out from without inwards, after having previously detached the bladder from the part which is to be removed. Courty says: The object of the operation is not merely to amputate the subvaginal portion of the cervix, but also to remove that extending between insections of the vagina and the body of the organ, which is the principal seat of hypertrophy." The dangers to be avoided are lesions to the perineum and to the bladder. When the malady is preceded by a rectocele or cystocele, or by both, it may be necessary to operate upon the herniæ of the rectum and bladder separately. Huguier has devised an interesting operation for this, which I take from Courty. "For cystocele, after having previously dilated the urethra with prepared sponge, he introduces the little finger by this canal, and if possible, the index finger of the left hand into the bladder. He seizes the tubercle and the anterior wall of the vagina with a small pair of Museux's forceps,

making an assistant draw them downward and forward, so as to stretch them and separate them, if possible, from the corresponding wall of the bladder. Then he passes, at the base of the fold formed by the part of the vaginal wall which he wishes to remove, a long pin, or several pins crossed, for example four, forming two crosses, taking care that the pins traverse the cellular tissue lying between the vagina and bladder without touching the walls of this organ, of which he is warned by the finger introduced into the vesical cavity. He throws a loop of thread behind each cross formed by the pins, forms a pedicle of the whole with a triple thread and applies the écraseur."

Episio-perineoraphy consists in the greatest extent of juxtaposition by extending the excisions from the vulva to the perineum, and in the increase of the depth and resistsnce of the cicatrix which contracts the vulva behind, a portion of tissue in the shape of a horse-shoe is removed, and two sides united by a double set of sutures, three deep and three superficial.

Critical Examination.—Savage says: Experience has shown the futile character of these and such—like plastic operations. The great sustensibility of the vagina defeats their object sooner or later." This very sweeping assertion is not sustained by the results of to-day. Gynecologists all over the world are operating for prolapsus, with a success more or less favorable. Some cases fail *in toto*, others are only partially successful, while another class are permanently benefited in every particular for which surgical interference was demanded. Discrimination in the choice of an operation, a proper consideration of the conditions enjoining it, with a just appreciation of etiological factors are as necessary here as in the larger operations. Anterior-elytroraphy is pre-eminently suited to some cases, while Simon's and Hegar's operation will be followed by better results in another. Huguier's operation is a difficult and dangerous one, but when carefully performed for the relief of certain conditions, is usually followed by happy results. Not even the majority of instances of complete or incomplete prolapsus is attended with perineal laceration, and I very much doubt if a prolapsed uterus has the power of lacerating the ano-perineal tissue, a prolapsed uterus follows the same general course as a fœtal presentation, that is, the curve of the sacrum. If, the prolapsus prior to making its final turn under the pelvic arch, has pressed for a long time upon the perineum, the perineal body becomes distended, and the perineum itself thin and patulous. If, once escaped, it has remained unreduced for some time, the perineum becomes a thin edge of "atrophied recto-vaginal septum" the space between the rectum and vagina being lessened. Another case, is a prolapsus complicating a lacerated perineum from parturition in which, of course, the double operation is demanded. The long continued pressure of a prolapsed uterus upon the anterior perineal triangle, produces, in time, many of the

changes incident to child-bearing, but never a laceration. The object aimed at is to secure a sufficient support for the uterus, in which the vaginal walls shall act as natural pessaries, to strengthen the perineum and to increase its saggital dimensions. These are the primary points of consideration in instances of simple prolapsus complete or incomplete, we desire to arrive at a position in which the final descent from under the pubic arch may be anticipated. If cystocele or rectocele or both shall accompany the prolapsed uterus, such an operation must be chosen as shall best meet these indications If the perineum be lacerated from any cause, the operation upon the vaginal walls must follow that of the reservation of the perineum, and here the incisions may be prolonged so as to narrow the vaginal outlet. Preservation of the perineum in whatever way it may be done will not of itself prevent extrusion, and is useful only as affording a more permanent support for a pessary. The prolapse may be due to hypertrophic elongation of the infra-vaginal cervix or to elongation of the supra-vaginal cervix. In the former we have a "prolapse without locomotion of the fundus," for while the fundus may be slightly dragged down, it is the exaggerated nutrition of the cervix which causes such an elongation as to bring the *os tincæ* near the orifice of the vulva. Here, too, we are apt to meet the conical cervix so often associated with sterility and dysmenorrhœa, or the *tapiroid*, an acquired form of hypertrophy due to defective involution, or to the "traumatisms of labor." (Goodell). For the relief of such conditions the redundant portion must be removed by the galvano-cautery or écraseur, or by Hégar's operation, which consists in exsecting a wedge-shaped piece from the redundant tissue, and bringing the flaps together by deep stitches passed through the whole substance of the cervix; or the whole rim of the os may be stitched to the vaginal mucous membrane. Where infra or supra-vaginal hypertrophy are associated, Huguier's operation has met with success.

Now, since neither form of these hypertrophic elongations constitutes a true prolapsus, if the plan of Huguier is to be resorted to only when procidentia accompanies both forms of hypertrophy, the cases will be exceedingly rare, since the occurrence is excessively infrequent. The fundus is always dragged down somewhat in these elongations, but there is no true prolapse, no descent of a fundus as a whole, and on the only part usually appearing outside the vulva is the elongated cervix of supra-vaginal hypertrophy.

I do not intend to convey the impression that procidentia may not occur with elongations of both infra- and supra-vaginal cervix, but that such instances are extremely rare and are pathological curiosities. Veit (*Zeitschrift f. Geburtsk.*, Bd. 1, S. 144) believed that primary hypertrophic elongation was very rare, and that this kind of hypertrophy was usually consecutive to prolapsus. The fact is just the reverse. It is the

hypertrophy that simulates the prolapsus. Partial hypertrophy of the cervix may exist in the peripheric parts or in the parts which form the walls of the cervical cavity. Courty, who read a most interesting paper on this subject before the Academy of Medicine, May 22, 1877 (quoted by him in "Uterus, Ovaries and Fallopian Tubes," p. 616), says: "It exists most frequently in the median line. It is often congenital, depending on arrested absorption of the partition which separates primitively the two uteri, and of which the columns of the *arbor vitæ* are the vestiges."

Anterior elytroraphy seems to have originated in the desire to rectify a cystocele which usually attends *procidentia uteri.* It may be objected to this operation. 1. That it is a delicate one, and 2. That it gives an insufficient artificial support to the uterus. The chief object is to make a proper support for the womb and for the anterior wall. If the uterus be prolapsed, and there is no rectocele dragging it down, if there be no hypertrophic elongation or perineal laceration, the operation of Sims or Emmet is probably the best. If the perineum be much dilated, if there should be a rectocele, colporraphy will be resorted to, or the colpoperineoraphy of Hegar where the perineo plastic operation is demanded.

Banga (*American Journal of Obstetrics*, July, 1882, "The operation for prolapsus uteri of Simon-Hegar *vs.* that of Bischoff"), says: "I deem it my duty to revoke the statement made in my former article as to the feasibility of Bischoff's Kolpoperineoplasty in every case of prolapsus, however complicated. More extended experience has shown me that this more justly applies to the Simon-Hegar mode of operating." And again he says; "I always thought that anterior elytroraphy was essential to secure a good result in any severe case of procidentia. However, the two last reported cases go far to show that the assistance to be derived from such a primary operation had been greatly overrated. Anterior elytroraphy had failed, and yet after colpoperineorraphy the prolapse was cured. Nevertheless, I shall continue to make anterior elytrorhaphy, especially where the bladder descends very low."

As a general rule I think the Simon-Hegar operation is to be preferred—both because it is more easily carried out and meets more fully the requirements. Again there are conditions of the posterior vaginal wall which render Bischoff's method utterly impracticable. Anterior elytroraphy may be resorted to for the cure of the cystocele, and later on it may be followed by colpoperineoraphy. Cases of supra-vaginal hypertrophy of the cervix are best treated by Huguier's method, which seems to offer the shortest road to a permanent cure. Great caution must be used against wounding the bladder or the peritoneal reflection behind. The exposure of the cervix is attended with considerable difficulty, and its retraction, after being severed, must be guarded against by transfixing the uterus above that point. Le Fort's operation is an exceedingly ingenious one,

and is preferable to either lateral or bi-lateral elytroraphy. It has the merit, too, of not interfering with coitus, while placing within the vagina an obstacle "which, from its position, ought to prevent a return of the prolapsus better than any other operation." This operation may be supplemented by perineoraphy if we desire to give more strength and resistance.

Courty says: "Posterior colporaphy seems to me theoretically preferable, and my practice has justified this theory; I should therefore advise it when there is reason for attempting a radical cure of these maladies. If the cystocele has not yielded to this operation, anterior colporaphy may be added."

Barnes states his conclusions as follows: "1. When there is prolapsus without marked elongation of the cervix, remove a portion of the mucous membrane of the anterior wall of the vagina on Sim's plan. 2. If there be considerable elongation amputate a portion of the redundant neck, and at the same time remove a triangular piece of the mucous membrane just in front of the cervix, the base of the triangle merging in the stump of the cervix, and bring the sides of the triangle together by sutures. 3. If there be considerable rectocele, with impairment of the perineum, perform the perineal operation, or posterior colporraphy. 4. Where the three conditions co-exist, all three operations should be performed. It will generally be best to do this in successive operations."

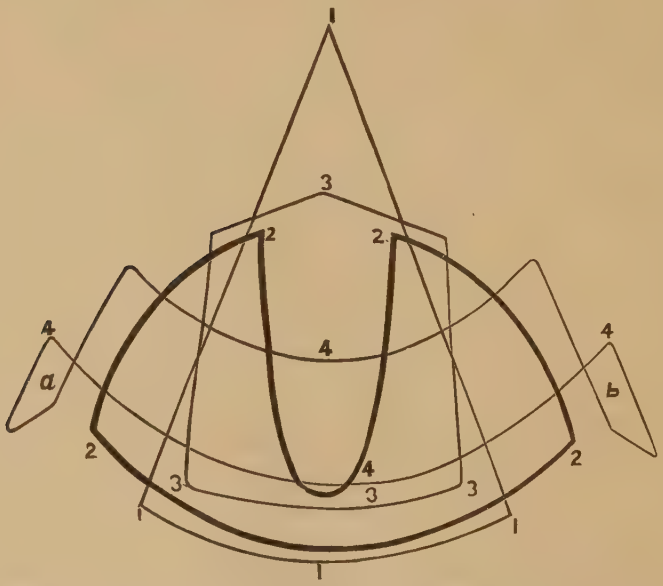

PLATE I.—This drawing, from Hart and Barbour, shows the various forms of raw surfaces made on the posterior vaginal wall. 1 1 1 1, Hegar's. 2 2 2 2, Bischoff's. 3 3 3 3, Simon's. 4 4 4 4, a b, Winckle's.

Mr. Whitehead (Manchester Medical and Surgical Reports, 1871, cited by Barnes), thought that to cure prolapsus we must aim more to relieve the pressure from above than to diminish the weight of the uterus or to increase the strength of its supports. Consequently he made two triangles, the posterior one with its apex towards the os uteri, and the anterior one with its apex downwards—he also amputated the cervix.

Hart and Barbour say: "Of all the raw surfaces recommended Hegar's is probably the best and simplest."

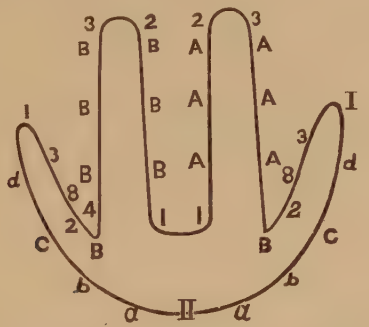

PLATE II.—Also from Hart and Barbour, shows Martin's operation. 1 2 3 4, raw surfaces on posterior vaginal wall. I. II, raw surface around introitus. The surfaces 1—4 are united., A to A., B to B. The edge 4 B., is turned in with the corresponding one of opposite side, along the line a. The surface I. II is united by sutures, so that the English and Greek letters are in apposition.

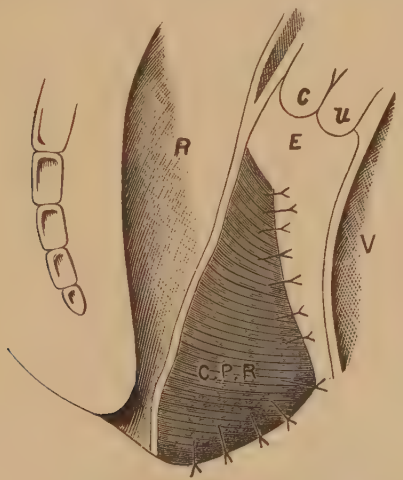

PLATE III.—From Courty, shows the Colpo-perineoraphy of Simon and Hegar: C. P. R., juxtaposition of the right and left bleeding surfaces of the vagina and perineum kept in contact by alternate sutures; at the upper part a projecting fold of the vagina makes a supporting surface for the cervix; E. vagina; C. U vaginal portion of the cervix; V. bladder; R. rectum.

Correspondence.

"EXTIRPATION OF THE UTERUS" AND SOME OF ITS ADVOCATES.

To the Editor of the Obstetric Gazette.

In the August number of the OBSTETRIC GAZETTE, Dr. R. S. Sutton takes me to task, and reviews somewhat severely, my article upon "Extirpation of the Uterus" published in the June number of that Journal. He begins his criticism with the statement, that he stood by the operating tables of more than a dozen of the leading gynecological surgeons of Great Britian and the continent of Europe, from Sept. 1881 to Feb. 1883; and then volunteers the information that among these surgeons "I count my friends Mr. Lawson Tait, and Dr. A. Martin, of Berlin."

As it is no very uncommon thing for American physicians and students, to stand by the operating tables of these foreign moguls, just what that fact has to do with my article denouncing the too frequent operation for extirpation of the uterus, does not appear; any more than does *his counting* Mr. Tait or A. Martin *his friends*. The spirit of toadyism displayed now-a-days by a certain class of Americans who visit Europe, for everything European is nauseating in the extreme to any well regulated YANKEE stomach; any reader of foreign letters written by men visiting colleges and hospitals abroad, must have observed the lamentable fact that even our profession is badly tinctured with the custom of aping the professors, and especially the Dutchman, these making themselves ridiculous in the eyes of the profession, and subjects of contempt abroad.

Dr. S. states that he stood at the elbow of Dr. Martin when he removed the uterus from the woman for prolapsus, (this operation I mentioned in my June article); he also states that "it was a case of complete procedentia uteri, and the cervix was covered with a deep ulcer secreting pus, also the vaginal wall was abraded and secreting pus;" evidently it was a bad case of prolapsus, but are there no other, and safer means of treating, even bad cases, besides removing the uterus itself? I should answer that question in the affirmative, although Dr. S. says there were but two things to do, viz., "close up the vagina against a menstruating uterus, or remove it."

Can it be possible that the Dr. has spent two or more years in Europe at the feet of the great masters, and only learned two ways to treat such a difficulty? If he will come to Michigan, the State he so contemptuously alludes to as having "less gynecological operations in a year than Martin and Schrœder does in three months," I will show him a

woman, who, less than two years ago was suffering with just as bad a case of procedentia, as he describes, and in which Dr. Martin removed the uterus to relieve. This patient's uterus protruded between the thighs as large as a babe's head, with deep ulcers secreting pus, and in addition to this, there was a deep ulcer at least two inches long through the posterior vaginal wall, ending in a blind pouch.

Not being in Berlin, her uterus was not removed, but she was put in bed and treated locally each day, with cotton saturated in different medicines, such as Bal. Peru, carbolic acid, Ung. Petroli, Iodoform, etc., having the vagina well washed out before each treatment; while internally she was given ergot and other remedies to reduce the size of the uterus; at the end of about two months this patient's uterus and vagina had healed, when a plastic operation was made uniting the upper third of the two vaginal walls, but as the patient had not passed the menstrual period, a small opening was left in the centre large enough to pass a large sized catheter, for the menstrual flow to escape through. The lady made a good recovery and still has her uterus and a short vagina; (by the way she had a lacerated perineum which was also repaired).

Now, besides not being mutilated this patient was not subjected to any such dangerous operation as removal of the uterus, neither was it necessary, in my case, nor I believe any other of its kind; and any man who extirpates a uterus for such a difficulty, in this intelligent country will be pretty liable to find a suit for mal-practice upon his hands – especially if done in private practice even though in doing the operation there is only a "loss of less than two tablespoonfuls of blood" as Dr. S. says was the case in Dr. Martin's operation for extirpation, (although the operator says in his report of the operation "the incision was followed by free hemorrhage.") An American woman would bleed more than that from cutting through the vaginal mucous membrance, but then I suppose there are women born there on purpose to perform operations upon in uterine surgery and so do not bleed.

Dr. S. says it is as easy for Martin or Schrœder to extirpate the uterus, as for most men to amputate a finger, and he knows of no American gynecologist, except, Dr. Sims, that is their equal, and yet, *Dr. Sutton lives in Pittsburgh, Pa.* He also says, their patients rarely die, although he has seen "Martin do seven operations on seven patients in two hours" —and *mirabile dictu!* "Prof. Schrœder do three ovariotomies on the same table in ninety minutes." Yet the doctor scouts the idea of their regarding those poor women as so much material for scientific research; perhaps not, but to a man who has not the privilege of counting these "European spayers" among his friends it looks that way.

Dr. S. thinks if I will visit those men for a few months I will "learn something." I have no doubt I should, but there is so much to learn between Grand Rapids and the sea shore, that it will take me a long,

long time to absorb it all; before I do learn what can be taught me here, I shall have to postpone my trip to Europe for that purpose, and at any rate, I have not yet learned the inferiority of Yankee brains to the article found abroad.

Dr. S. takes me to task for the statement that Battey's operation has been taken up abroad and performed hundreds of times, and asks for my data, as he says Dr. Battey's operation "is simply not done in Europe at all." Well I can only say, that, a rose by any other name will smell as sweet.

The fact is, those gentlemen across the pond distain to adopt anything American, as American, but make some slight modification, no matter how insignificant, and do the operation by another name; Mr. Tait's operation is a fair sample. It is childish to call it by any other name than Battey's operation; what difference does it make in the operation whether the ovaries are diseased or healthy, so far as the operation itself is concerned? Mr. Tait removes both ovaries and tubes; he removes the tubes that he may call it Tait's operation instead of Battey's. Even Dr. Martin of Berlin, says, "the term Tait's operation should be confined to the removal of *diseased tubes*.

That Tait's operation is considered but a modification of Battey's, by even foreign writers is shown in "Tauffer's Contribution to the Literature of Castration in Women, with a Table of Cases," in which the author states he "is favorably disposed towards it under certain conditions and with appropriate precautions." And after naming those precautions and conditions demanding the operations, he says, "If the tubes show the slightest evidence of disease they should also be removed," he does not say Tait's operation should be performed, but while considering Battey's operation, he simply mentions how it may be modified.

That there is only one condition calling for extirpation of the uterus, I am convinced, not only from my own observations, but from the very writings of the foreign gynecologists. Dr. Sutton quotes malignant disease of that organ, and one of those gentlemen (friends of Dr. S.) says the operation has resulted so badly, both in fatality and in recurrence of the cancer as to shake confidence in its future usefulness, and still Dr. S. says they seldom die and that the operations are not made for experiment.

As for extirpation of the uterus being a justifiable operation for displacement of that organ I can only say, taking the teachings of Drs. Martin and Schrœder as a guide, we must come to the conclusion that it is not, when they tell us, that even for malignant disease the operation is questionable on account of the liability of return of the cancer in a short time; and if the operation is successful the short immunity from the malignant growth scarcely pays for the fearful ordeal of extirpation of the uterus.

As for the statistics given us from time to time, they must be taken with a grain of allowance, as they seem to conflict with other statements made by the same operators; at one time giving us statistics showing that more than two-thirds of their cases recover, and at another time stating the operation is questionable, owing to the recurrence of the disease and fatality attending the operation. It would seem then, the compiling of tables of statistics was comparatively easy work, and as unreliable as easy.

We all know how little students of medicine see, while attending college, of the after treatment of patients upon whom great operations have been made, and if such patients die in the course of two or three weeks, the student who saw the operation rarely hears of it. Most operations at the clinic are successful, in the *minds of the attending students*. The case operated upon by Martin for extirpation of the uterus, and the one Dr. Sutton mentions, had been previously operated upon for amputation of the cervix, two anterior and posterior kolporrhaphy, perineorrhaphy, and just before removing the uterus to another anterior and posterior kolporrhaphy; after the woman had recovered from the operation of removal of the uterus, she was subjected to *another* anterior and posterior kolporrhaphy, at least so the operator states, but for what reason, is known only to himself as no one would be able to guess why such operation should be made after the uterus had been removed.

I should like to ask the reader if it is any wonder there was deep ulcers secreting pus both upon the uterus and vagina? What good could be expected from amputation of the cervix in a case of uterine displacement? We know of none, but we do know, the operation of amputation of the cervix has been discarded for some time by American gynecologists, and now is rarely done by any one. It does seem from the number and variety of operations made upon the woman that they must have been experimenting for a cure for uterine procedentia; and while Dr. S. claims she made a good recovery, the fact that she was dead in a few months after, would lead one to suspect (in absence of knowledge of what she really did die of) that she could not live without a uterus. And by the way it is a noticable fact that women who do survive removal of the uterus are apt to die within a few months.

As for Dr. S.'s statement that I "had better correct the shams in Michigan professors", I must say he will have to be more explicit, for I do not know to whom he refers when he says—"A certain Michigan professor of surgery when he began his report of a number of ovariotomies; by saying "since my visit to Keith" and then Dr. S. adds "when I read the report I supposed he had seen Keith operate, but when I asked *my friend* Dr. Keith how long he visited him, he replied he did not see me operate, but spent an hour or two talking to me in the room here." Perhaps our Michigan professor does not enjoy to the extent of Dr. Sutton the in

estimable boon of *counting Dr. Keith his friend;* but whether he does or not, I cannot see why the Michigan professor was shamming when he simply said—"Since my visit to Dr. Keith I have done so and so," for it seems Dr. Keith himself said the professor spent some time in his room in conversation, and although he perhaps did not see Keith operate, there is no reason why he may not have learned something about ovariotomy from a simple conversation with the great ovariotomist who sends his son to the medical colleges of New York City to study medicine. Because Dr. Sutton has enjoyed the special privilege of personal friendship with these foreign masters and has "stood at their elbows" while they were operating, besides having the advantage of being "long abroad and having access to everything," he should not deny a poor plodding Michigan surgeon the gratification of making the simple statement that "since his visit to Keith he has learned to operate better." Such a statement may possibly smatter a little of boasting, and Dr. Sutton seems to think it does, for he says—"I don't speak as did a certain Michigan professor." No, perhaps not, but the boast of having visited Keith sinks to the level of extreme modesty beside such expressions as: "I stood by the operating tables of more than a dozen of the leading gynecological surgeons of Great Britain and the continent of Europe;" "I count my friends Mr. Lawson Tait and Dr. A. Martin;" "In eighteen months' experience"; "I was with Lawson Tait day after day for nearly three months;" "I was long abroad;" and many others of the same stripe.

However, I presume the Michigan professor, whoever he is, will be able to account for the knoweldge he obtained from Keith to Dr. Sutton's satisfaction.

Since commencing this article I have read the report of a late meeting of the American Gynecological Society, and I notice that with the exception of Dr. S. the members denounced the operation of extirpation of the uterus as an unjustifiable operation in fully as severe terms as did my humble article to which Dr. S. takes exceptions; but I presume the doctor will doubtless charge that up to their non-proficiency, as he says none of them are Schrœder's equal as operators.

In conclusion I would suggest to Dr. S. that, he, with all his advantages obtained abroad, should not be too severe upon humble American surgeons, who have never had the privilege of visiting the great European hospitals; but have had to gain much of their knowledge and experience from their own private practice. Some of these cross-road surgeons notwithstanding their limited advantages could doubtless give even a Martin or a Schrœder points upon surgery, and especially surgical emergencies. There are many surgeons in the United States, isolated from professional help, who, single handed and alone have performed operations without instruments, except such as every physician carries in his

pocket-case, that, had Messrs. Martin or Schrœder performed, they would have heralded it to the profession as a wonderful achievement; and yet our modest workers in the professional hive, in many cases have never even mentioned perhaps to their local medical societies, that they have done anything extraordinary. I have known of Cæsarean section being done with only one assistant, and the instruments contained in a pocket case; of another where an operation for strangulated hernia was made without assistant or chloroform; and another country surgeon amputated at the thigh, with a common case knife ground up for the purpose, using an ordinary carpenters's saw to saw off the bone; he was called a long distance, and arriving found he must operate, and having no instruments he *made* them, and did a good job; his patient recovering as promptly as though performed by a kid-glove surgeon with a thousand dollars worth of surgical instruments.

A very interesting book could be written from the experience of our pioneer surgeons, could the facts be collected. I know of one instance where a uterine fibroid (pedunculated) was removed by a violin string passed through a silver catheter and used as an ecraseur. Perhaps if Dr. Sutton's friends on the other side, had to make their operations under these difficulties, they would not be able to make "*three ovariotomies in ninety minutes*," and they would find, also, that surgery in private practice was a vastly different thing from surgery in a large hospital where they have absolute control of their patients' lives as well as bodies, either of which they can demand, and no one to gainsay them.

54 Monroe St., Grand Rapids, Mich. O. E. Herrick, M.D.

ADMINISTRATION OF ERGOT PER ANUM.

To the Editor of the Obstetric Gazette.

Sir!—In its issue for June of current year, the Obstetric Gazette (according to the *Medical and Surgical Reporter*) a short notice of my paper on the administration of ergot of rye *per anum*. But as the quantity of ergotine indicated in said periodical is considerably higher than the dose I make use of, and as I consider that such a large quantity might be positively hurtful, I beg you will allow me to give you my original formula, such as I continue to make use of:

℞ Ergot. dialysat. centigrm. 25—50 (5—10 grains); Ol. theobrom. 1 gramme, 50—(30 grains); Vaselin. centigrm. 30—(6 grains).

M. f. suppos. No. 1.

Since the publication of my paper, my personal experience and that of many other doctors has confirmed the advantages of the above mode of administration in most cases.

There is however one drawback. After a certain number of applications, rectal irritation or even tenesmus is apt to supervene. It will there-

fore be necesary, in case where a prolonged use of ergotine is necessary, to pause every now and then for a few days. I am, sir,

Yours very truly,

Liege, Belgium, Oct. 6th, 1883. DR. P. LIEBRECHT.

Society Reports.

THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, October 7th, 1883.

The President, R. A. CLEEMANN, M.D., in the Chair.

PORRO-MUELLER OPERATION.

Dr. W. H. Parish reported this case and exhibited the uterus, the abdominal incision (which had united) and surrounding wall, the stump of the cervix in position at the lower angle of the wound, the entire external genitals and mons, including the vagina and bladder. The ureters were found entirely free.

Sallie Smith, a deformed dwarf, applied for admission to the Philadelphia Hospital in April, 1883. One of the internes placed her among the pauper women of the out-wards of the almshouse. There, all the conditions surrounding the dwarf were such as to contribute to her physical deterioration. The women in that portion of the institution are unduly crowded—the ventilation is entirely inadequate, and the food of a character unfit for a pregnant woman. Her presence in those wards was unknown to any of the visiting obstetricians of the hospital until June 15, when Dr. Pauline Root, one of the internes, ascertaining her pregnancy and her surroundings conveyed the information to me. I at once had her transferred to the obstetric wards where she was specially provided for and her condition carefully investigated. She was a native of Philadelphia. She was unable to give her age—although dwarfs usually appear to be older than they actually are, yet from what could be learned of her past life, from evident atheroma of her bloodvessels and from her appearance, I concluded that she must be over forty years of age. Her parents were poor, were born in Ireland, and died in this city during her infancy. She had been told that her father died of heart disease, and her mother of insanity at the menopause. She did not know how or by whom she was cared for during her early childhood. She attributed her deformities to a fall supposed to have been received when she was a very small child. She was unable to walk until she was seven years of age. Her occupation, from the time she was first able to work, had been that of a house servant. Menstruation began at sixteen years, continued at the usual periods, but rather profusely until the beginning of pregnancy.

She could not recollect ever having been seriously ill. I learned from some of her acquaintances that for a number of years she had been of intemperate habits, repeatedly becoming intoxicated, and indulging in promiscuous sexual intercourse. Her bad habits led her to exposure to inclement weather, and, with the influence of cold and damp, doubtless led to the disease of the kidneys, to which I shall again refer.

She was pregnant for the first time. The date of the last menstruation was given by her differently at different times. At one time she would give the 1st of October, at another time, the middle of October as the date when menstruation last ceased.

She felt movement of the child about the middle of February, though she was also uncertain in reference to the date. The *fundus uteri* reached nearly to the ensiform cartilage, and I concluded that the full period of pregnancy would be attained about the 10th or 15th of July.

She was fifty-one inches high, the head small, mind sluggish, and memory defective; yet she was not an imbecile. The clavicles and bones of the upper extremities, though small, presented no special deformities; they did not show the usual rachitic incurvations. The right thorax was very prominent posteriorly and laterally; the left thorax markedly depressed posteriorly and laterally. Both lungs, but more especially the left one, were greatly encroached upon by the deformed thoracic walls. The heart was displaced upward and to the left, its apex being on a level with and external to the left nipple. Pulse 86, of good volume, but intermittent. Bowels moved daily; urination frequent. Urine contained one-quarter albumen, and also granular and hyaline tube-casts. The eyelids were slightly œdematous, but œdema was not recognizable in any other part of the body. The patient complained of frequently recurring frontal headache. At times things seemed darkened to her, and dark specks appeared before the eyes. She had never experienced convulsions, but occasionally had slight fainting attacks.

The vertebral column was markedly curved. The upper third of the dorsal region was slightly convex posteriorly, the lower two-thirds markedly convex posteriorly and also decidedly convex to the right. The lumbar portion was convex anteriorly and to the left. A left anterior lumbar convexity, compensating for a right posterior convexity of the dorsal region. In the erect position, the lower ribs and the crests of the ilia seemed in contact, and the left iliac crest about one inch higher than the right. Posteriorly there was a deep depression at the sacro-vertebral articulation, and the posterior-superior spines were unduly approximated. Externally examined, the sacrum, in its upper two-thirds, seemed directed nearly horizontally backwards.

External measurements with a pelvimeter showed about fifteen centimeters or six inches between the posterior surface of the top of the sacrum and the anterior surface of the top of the symphysis pubis. Nor-

mally this measurement is about eight inches. Deducting three inches from the external conjugate of six inches, would have made the internal or true conjugate three inches. The distance between the anterior-superior spines measured twenty-five centimetres, or about ten inches, the normal being ten and one-quarter inches. Between the normally widest portion of the crests of the ilia the distance was a little less than between the anterior spines—that is, a little less than ten inches, the normal being eleven and one-half inches. The measurement between the spines, indicated the pelvis to be rachitic, though it will be seen that the pelvis was not the more usual, typical rachitic one. The external measurements did not indicate decided transverse narrowing of the true pelvis, though internal manual examination did show decided transverse narrowing.

Repeated internal examination showed the promontory to be jutting forward, and the anterior surface of the sacrum to be nearly straight, and directed almost horizontally backward. The symphysis pubis was correspondingly inclined downward and backward.

The oblique conjugate measured three and one-fourth inches, the depth of the symphysis pubis one and a half inches; hence according to Lusk, deducting three-fourths of an inch from the oblique conjugate, I estimated the true conjugate to be two and a half inches. The transverse diameter of the superior strait was evidently considerably shortened, but I could not satisfactorily determine the degree of the shortening. The antero-posterior diameter of the excavation was taken to be less than the corresponding diameter of the superior strait, and all the measurements of the outlet less than the corresponding ones of the superior strait. The pelvis was diagnosed to be a generally contracted one, with proportionally greater diminution of the conjugates, and the general contraction increasing from above downward, so as to produce a somewhat funnel-shaped pelvis. The vaginal canal was narrow, the os uteri high up, and the uterine fundus markedly tilted forward. The abdomen was remarkably pendulous.

When the patient first came under our observation, pregnancy seemed to have reached about the end of the ninth lunar month, according to the most probable interpretation of the symptoms, and of the information she gave. The question arose, would it be best to produce a premature labor at the end of the ninth month, with a generally contracted pelvis, and a true conjugate of two and a half or two and three-quarter inches? I decided that should a premature labor be attempted under such circumstances, craniotomy, or some other similarly dangerous operation, would be eventually necessitated, and that the dangers of such operation would be increased by the addition of those incident to the production of premature labor. Dilivery with forceps, or by podalic version, seemed out of the question. There was a choice between craniotomy,

symphysiotomy, Cæsarian operation, gastro-elytrotomy, and the Porro operation.

In such a pelvis, craniotomy would have been difficult and tardy, and been shown, especially by Parry, to be attended with a mortality of mothers too large to compete with abdominal section.

I did not prefer the Cæsarian operation, because of its excessive mortality to mothers in European hospitals, and because the six Cæsarian operations performed in hospitals in this country, all were fatal to the mothers. A condition almost essential to recovery after Cæsarian operation is rarely met with, even after normal deliveries, in hospitals. I refer to sufficient retraction of the uterus, A flabby uterus, after a Cæsarian operation leads to blood-poisoning and to general peritonitis. The experience of many hospitals, as also *á priori* reasoning, would make the Cæsarian operation of very questionable justification in hospitals, especially in large maternities, and more decidedly still in general hospitals. The Philadelphia Hospital is not only a general hospital, but is also part of a large almshouse. Gastro-elytrotomy and symphysiotomy have given good results in the hands of a few operators, the former especially in America, the latter in Europe; but both operations have been performed with comparative infrequency, and the question of their respective merits cannot be determined by the very limited number thus far performed.

I do not desire to discuss *in extenso* here the general question of the relative value of the different operations performed for the relief of advanced pregnancy in very small pelves. Among the considerations inducing me to adopt the Porro operation, with Müller's modification, were, the smaller mortality to mothers attending this operation in hospitals, and and the opportunity it allows the operator of selecting daylight, and of securing the needed assistants.

The patient was placed under the influence of quinine, of Basham's mixture, and of occasional doses of the compound jalap powder. Woollen underwear and proper diet were secured for her. She was isolated from all lying-in women. Her condition did not improve, however, as the time for operation approached, but on the reverse, a persistent œdema of the face, more troublesome headache, and more marked disturbance of vision, with an increasing quantity of albumen in the urine, all pointed to steadily increasing uræmia. The time chosen for the operation was what was supposed to be the end of the thirty-eighth week of pregnancy. A large, well-lighted, well-ventilated room in the Children's Asylum, remote from the obstetric wards, and one that had for years been used as a private parlor, was selected in which to operate, and in which the patient was to remain after the operation. This room was divested of curtains, carpets, and furniture; its walls and floor were thoroughly scrubbed with carbolized water. The room was then refurnished with chair, table, and a new bed. In short, every means was resorted to to

improve, as far as possible, the unfavorable conditions incident to so large an institution as the Philadelphia Almshouse.

The members of the obstetric staff had agreed with me in the diagnosis of the patients's deformities, and also as to the propriety of the performance of a Porro-Müller operation. The patient was also kindly examined prior to the operation by Drs. Albert H. Smith, Robert Harris, M. O'Hara, and Anna Broomall. After receiving a full explanation of the nature of the operation, the patient gave her entire consent. The operation was performed on June 30, 1883, with the assistance of Drs. Duer, Keating, Musser, Stryker, Montgomery, Clara Marshall, and Bernardy, all members of the obstetrical staff, and also with the assistance of Dr. McLoughlin, warden of the hospital. There were present Drs. S. D. and S. W. Gross, Ellwood Wilson, J. L. Ludlow, Albert H. Smith, Anna Broomall, J. H. Brinton, Hannah Croosdale, and other physicians. On the morning of the operation the room was carbolized with the spray, but the latter was not used during the operation. All instruments were kept in a two per cent carbolized solution, and Listerism, minus the spray over the patient, was in different details observed. On the morning of the operation the patient received a general bath, and the bowels were moved by enema. A half hour before the operation she received two ounces of whisky. Dr. Joseph Hearn, one of the surgeons of the hospital, and an experienced anæsthetizer, kindly administered ether during the operation. After etherization the bladder was emptied with catheter. An incision was then made in the median line of the abdomen seven inches in length, extending from two inches above the symphysis pubis to about one inch above the umbilicus, passing to the left of the umbilicus. The slight bleeding from the lips of the abdominal incision was controlled by artery compressors before opening into the peritoneal cavity. The absence of intestine from in front of the uterus was ascertained by percussion before making the incision. The uterus was easily raised from the abdominal cavity.

Owing to the anterior lumbar curvature, and to the length of the incision, it was possible to completely prevent the escape of intestines. After the uterus had been turned out, a protector made of two layers of flannel, with an intervening layer of protective silk, was placed over the abdomen; the object being to avoid chilling, and to prevent the escape of blood and other fluids into the peritoneal cavity. This protector, when when used, was wrung from a warm carbolized solution. The next step was to place around the cervix the wire of an ecraseur, and to constrict the tissues in its grasp to such an extent as to stop all circulation of blood through the uterus without cutting through the peritoneum. This step required speed, care, and judgment. The liability of a loop of intestine or of omentum to be caught by the constricting wire had to be carefully guarded against. Immediately that sufficient constriction had been

secured, a short incision was made with a pointed bistoury through the antero-uterine wall down to the placenta, for the placenta proved to be attached anteriorly. The incision was then rapidly extended, from near the neck to the fundus, with a probe-pointed bistoury, guided by two fingers of the left hand introduced into the incision. The blood pent up in the uterus by the constricting wire escaped freely, but did not enter the abdominal cavity. The incision passed to the external surface of, but not through, the placenta. The hand was immediately introduced into the uterus through the exposed membranes at the fundus, and the child quickly turned out, the placenta being in this manœuvre detached in main from the uterus. The cord was promptly tied and cut, and the child handed to Dr. Keating. It was asphyxiated when delivered, and presented a very unpromising appearance.

It, however, quickly breathed and cried under the efforts of Dr. Keating at resuscitation. The rapid resuscitation was effected by alternately dipping the child in basins of hot and of cold water. After removing the infant, the uterus, with both ovaries and both tubes, was amputated a half-inch above the constricting wire—this point was about at the internal os. It was then seen that the wire had completely controlled the circulation, and not a drop of blood escaped from the stump of the uterus.

The next step consisted in passing obliquely through the stump two steel pins five inches in length, one above, the other below, the wire. After this a strong carbolized silken cord was passed around the stump, in the line of the wire, and partly tightened. The wire was then cut and removed, and the silk cord then very firmly tightened and securely tied. Special care was given to the tightening of this cord and to the tying of a secure knot. The ends of the pins rested latterally on the abdominal walls, and under the ends, on each side, was placed a piece of sheet-lead. The stump was thus secured outside of the abdominal cavity, and rested at the lower angle of the wound. New carbolized sponges on handles were introduced into the peritoneal cavity, down into Douglas' pouch, but the entire cavity was free from blood or other fluid.

The abdominal wound was then closed by deep and superficial silver sutures. The deep ones were introduced so as to include the peritoneum. During the introduction of the deep sutures, flat carbolized sponges were introduced beneath the incision, so as to catch what oozing might occur from the needle punctures. The external portion of the uterine stump was brushed over with carbolic acid, and then invested with lint saturated with carbolized oil. A strip, two inches wide, of dry carbolized lint was placed on the incision; over this a few strips of rubber adhesive plaster were applied transversely, over these a thick layer of carbolized cotton, and over all a flannel binder. The patient was put to bed, and surrounded with pans of hot water. Dr. Montgomery took charge of the

patient's general condition during the operation, and administered during its performance four hypodermic syringefuls of whisky. He reports that the time taken up in the operation, from the beginning of the abdominal incision until its complete closure, occupied forty minutes. During the operation the pulse ranged from 100 to 128, the greater frequency being during the making of the incision in the abdominal wall, and was probably due to impeded respiration. The constriction of the cervix had no appreciable effect upon the pulse. Soon after being put to bed, the pulse was 132, but in two hours was 108 per minute, and of good volume. The respirations during the anæsthesia became disturbed and imperfect, producing considerable cyanosis, and probably causing increased frequency of the heart's action.

The patient rallied well, as was shown by return to consciousness, by bodily warmth, and a fair pulse. For about sixteen hours her condition seemed very favorable, excepting that the kidneys had ceased to act. At the end of twenty-three hours there was marked change for the worse; the mind wandering, pulse 140, temperature 100° F. An inspection of the dressing at that time, showed some oozing from the stump—perhaps six ounces—but it had then stopped. An additional ligature was placed around the stump, and one of the uterine arteries was separately ligated the other could not be found; the stump was also brushed over with Monsel's solution. There was no subsequent oozing. That there should have been any loss of blood in this manner was a surprise to me, as the original ligature was so very firmly tightened and secured, and had for a number of hours after reaction so perfectly controlled all bleeding. There was marked atheroma of the vessels of the stump, as was revealed *post-mortem*. After the twenty-third hour the patient grew progressively worse, became uncontrollable and delirious, had convulsive manifestations, and died in coma. There was no vomiting until twenty-six hours after the operation, and it recurred only once. She experienced but slight pain, and sulphate of morphia was given in small quantity—one-fourth gr. hypodermically, soon after the operation; again one-sixth gr. at the end of eleven hours—and subsequently about the thirty-sixth hour, because of the great jactitation and the difficulty of keeping the patient in bed. The morphine was given hypodermically by Dr. McLoughlin in such small amount that the coma could not have been due to it. Eight hours after being put to bed the urine was drawn with the catheter. Subsequently the catheter was introduced at different intervals, but on each occasion the bladder was empty, and it was found empty at the *post-mortem* examination. Only three ounces of urine were secreted after the operation. The patient survived forty-two hours.

Dr. John Gillespie made a careful analysis and microscopical examination of the urine secreted after the operation with the following report:

The specimen of urine from the woman upon whom the modified Porro operation was performed was examined, with the following result:

The specific gravity was 1023; reaction decidedly acid. The urine was of a dirty, yellowish-brown color, and contained a large amount of albumen (rather more than one-third.)

The amount of urea contained in the urine received by me was 10.5 gr. for the entire amount. Therefore, if only three ounces of urine were excreted in forty-two hours, the total amount of urea excreted would be about fifteen grains.

The sediment contained granular, hyaline, and epithelial casts, renal and bladder epithelium, and granular detritis and blood corpuscles.

Dr. Wile, the acting pathologist of the hospital, conducted the autopsy, and I extract the following from the pathologist's records:

On opening abdominal cavity several slight adhesions were found between the visceral and parietal peritoneum in the region of the surgical incision. Bloodvessels around incision, markedly congested. No exudation or other evidences of general peritonitis.

Stomach and intestines distended with gas; spleen small, atrophic.

Left kidney: Considerable displacement, found between sixth and seventh ribs. Somewhat lobular, on surface pea-sized cyst, which extends somewhat into the cortical substance of kidney. Cortex reduced, the seat of parenchymatous, solid, interstitial change.

Right kidney: Position normal; shape altered, considerable flattening on upper surface; hilus very marked; capsule adherent, seat of parenchymatous change. Both kidneys in state of contraction.

Pelvis: One ounce of bloody serum in Douglas's pouch. Peritoneal and subperitoneal tissue the seat of considerable œdema.

Veins around vagina enlarged.

Cervix uteri virginal; orifice sound.

Liver enlarged; fatty.

Thorax: Left side, pleura adherent.

Heart: Left side firmly contracted; right relaxed. Right auricle and ventricle seat of a firmly adherent chicken-fat clot. Left ventricle contained small amount of dark, slightly coagulated blood. Left ventricle markedly hypertrophied. Mitral valve, slight thickening. Papillary muscle considerably hypertrophied.

Lungs: Hypostatic congestion; œdematous.

Cause of death: Heart-clot.

Report of histological appearance of kidney. H. Wile, M.D.

The bloodvessels are for the most part congested, filled with corpuscles, and surrounded by a growth of connective tissue. The uriniferous tubules are found filled with cellular and granular debris. Some contain pigment, the result of slight hemorrhages. The epithelium lining of the tubules is granular, and in some places in a state of proliferation, indica-

ting a catarrhal process. The growth of connective tissue between the tubules and about the Malpighian bodies is more marked in some places than in others, and the interstitial process may be regarded as fairly established.

A careful measurement was made by Dr. S. D. Lazarus and myself after the pelvic viscera had been removed, with the following result:

Superior strait:

Anatomical conjugate	3 inches.
Transverse	4 "
Right oblique	3¾ "
Left oblique	4 "
Oblique conjugate	3¼ "
Depth of symphysis	1½ "
Obstetrical conjugate	2¾ "

Excavation:

Conjugate	2¾ "
Transverse	4 "

Upper four sacral vertebræ directed nearly horizontally backward; lower portion of sacrum and coccyx curved sharply forward.

Inferior strait:

Conjugate	2½ inches.
Oblique	2¾ "
Transverse	3½ "

A perpendicular to plane of superior stait is nearly horizontal, striking the abdominal wall about midway between umbilicus and top of symphysis.

A perpendicular to plane of inferior strait would strike the upper part of the third sacral vertebra.

The death of the dwarf must be attributed chiefly to the existence of interstitial and parenchymatous nephritis. She had rallied from the shock of the operation. There was no peritonitis, excepting in the immediate vicinity of the incision.

It was too early for septic poisoning to produce death, and there were no indications that such had occurred. The loss of blood had been trifling, and death occurred too soon to be attributable to exhaustion from this cause.

The acute and almost complete suppression of urine, the symptoms prior to the operation, and the results of examination of the urine and of the kidneys after death, all pointed to the diseased kidneys as the cause of the fatal result to the mother.

It is well to note that union had occurred throughout the entire extent of the abdominal wound. There were adhesions between the small intestines and the parietal peritoneum along the line of incision. The latter fact is of interest, viewed in the light of death in a

few instances after laparotomy being attributed to strangulation of the bowel, due to constricting inflammatory bands.

The child was of small size, and died at the end of three weeks, of inanition.

DISCUSSION.

Dr. R. P. Harris remarked that this was the only Porro operation that had been complicated by diseased kidneys. The case was an unfavorable one in consequence of this complication. The albuminosis character of the urine was supposed to be due to mechanical interference by the enlarged womb, but, unfortunately, this was not so. The bad habits of the patient had led to a general disease of the arteries as well as of the kindeys. The former were atheromatous. The Porro-Muller operation has been performed thirty-four times. The unmodified Porro, eighty-two times, total, one hundred and sixteen cases, of which forty-eight per cent have been successful in saving the lives of the mothers. When the pedicle or stump is dropped, it ceases to be a Porro operation. Of thirteen cases in which the stump has been dropped, eleven has been fatal. Dr. Godson is writing a full history of this operation, including the many experiments which have been made on animals to determine the best method for each step of the operation and the causes of death. Dr. Porro has saved four out of five cases in his own hospitals. In the Milan Hospital nine were saved out of twelve. In Germany the success has been poor, but in Austria better.

Dr. O'Hara asked why the Porro operation should be modified when it had been so successful in the hands of the originator.

Dr. Harris.—Dr. Muller was called upon to operate in a case in which the fetus had been dead for some time and was putrid, the uterus being distended with gas. To prevent any septic matter finding its way into the abdominal cavity he enlarged the abdominal incision, lifted the uterus out of the abdomen and used cloths around it and over the wound before incising the uterus. This patient recoved. The mortality this year has been very slight.

Dr. E. E. Montgomery has been associated with Dr. Parrish in this case, as one of the hospital staff, and at first thought the case should be allowed to go on to full term before operating, and the Cæsarean section or laparo-elytrotomy, as practiced by Dr. T. G. Thomas, should be the selected form of operation, but Ceasarean section has been very fatal in large hospitals, doubtless because it is generally a last resort after the patient has been long hours in labor, and for that reason is dangerous. But if a large drainage tube was passed through, entering at the abdominal incision and out of the vagina and a constant flow of anti-septics kept up, a good condition might be secured.

During the operation a few modifications suggested themselves, one of these was to divide the cervix uteri by a V. shaped incision, the peri-

toneal surfaces being united over the wound, a flat Peaslee drainage tube being introduced and the stump dropped. Dr. Harris tells me that Schroeder has tried this and that it has been done twice by ——, once successfully.

He thought the wire of the ecraseur passed around the cervix before removing the child, a source of danger to the latter as well as being likely to embrace a loop of intestine.

Dr. Harris, in criticising the plan of dropping the stump, called attention to the fact that the portion of uterus embraced in the ligature is not a pedicle, it is a stump and will continue to contract, and oozing of blood or even profuse hemorrhage is liable to occur. It has been found impossible to prevent this by any form of ligature that has been tried. If the stump is dropped this hemorrhage oozing will take place into the abdomen and will be a certain cause of death. Dr. Isaac E. Taylor came near success, but his patient died from thrombosis on the twenty-sixth day, during an attack of phlegmasia alba dolens. It would be very desirable to avoid the dragging on the abdominal wound.

Dr Montgomery gave a short resume of the cases treated by dropped stump and the causes of death in them.

Dr. Parrish remarked that the disease of the kidneys was undoubtedly the cause of death, the implanting of the acute condition caused by pregnancy upon the previous chronic disease. He also spoke of the possible deleterious effect of the ether upon the system laboring under such a condition of the kidneys. It made the administration of ether in such cases a very serious matter.

Dr. Parrish also exhibited specimens from a case of

EXTRA-UTERINE PREGNANCY.

and made some remarks upon the history of the case. He had attended the patient in her first labor, seven years ago. She was a brunette of very restless and active habits in disposition and was quite uncontrollable, she was up and about her house a few days after her labor and the result was sub-involution, which persisted until her death; during the interval she had passed out of his care and had been subjected to local treatment including the use of sponge tents. These had developed pelvic inflammation, and later she was troubled with frequent micturition and dysmennorrhœa. She afterwards came under his care again for treatment of these troubles, and on one occasion he had applied leeches to the cervix and gave her positive orders not to leave her bed, but festivities were going on and she went down and assisted in making ice-cream and cake and later in eating them; this indiscretion was followed by a second metritis. He afterwards treated her for the dysmenorrhœa by numerous minute punctures of the cervix and the application of tincture of iodine and the introduction of a sponge tent. The next period was not so painful, and the second was missed. He told her she was proba-

ably pregnant, but two weeks later a slight show occurred and fearing an abortion advised rest in bed, she refused an examination and would not be quiet, the flow continued but did not increase, but there was pain in the pelvis in addition. Eleven days after the flow commenced a sudden attack of intense pain occurred, the patient was completely prostrated and was carried up stairs. As he was not at home, Dr. O'Hara was called in and used morphia hypodermically. He found, on examination, a mass in the posterior part of the pelvis, the uterus was pushed forward against the pubes. He diagnosticated rupture of a fallopian pregnant cyst and internal hemorrhage, and gave opiates to relieve the intense pain. The palor and exhaustion became more pronounced and death occurred thirty hours after the first symptom. Other physicians who saw the patient did not agree with Dr. Parrish in his diagnosis. The autopsy revealed no recent peritonitis, there was blood in the pelvic and abdominal cavities, this had escaped from a ruptured cyst of the fallopian tube. The fetus exhibited was found in the pelvic cavity. The position of the cyst was such that it would have been an easy operation to open the abdomen and ligate and remove the cyst and ovary and cleanse the pelvic cavity. The fallopian tube involved is dilated except at the uterine extremity. The other tube is occluded at the fimbriated extremity; inflammatory bands derange the relations of the different pelvic organs. We have here the history of inflammatory process changing the epithelial linings and relations of the fallopian tubes to the uterus and ovaries are predisposing causes of extra-uterine pregnancy.

Dr. Harris remarks that the hemorrhage after conception, the peculiar location of the pain, and the pallor make the diagnosis an easy one. He had one patient that recovered spontaneously. The operation suggested by Dr. Parrish has been performed once successfully. Dr. T. G. Thomas made the diagnosis and wished to operate, but the husband, a physician, differed in opinion and would not consent: that patient lived sixty hours after the accident. Dr. Playfair in his book advises the operation.

Dr. O'Hara saw the case early and would not make such a diagnosis, he saw no signs of internal hemorrhage then, he thought of peritonitis and cellulitis, there had been no history of a cast of the uterus. He did not see how a positive diagnosis of extra-uterine pregnancy could have been made at that time. The patient was certainly going to die and he would approve of an exploratory operation.

Dr. Parrish remarked that Dr. O'Hara was perhaps right, he (Dr. P.) was the only physician present who looked at the case in that light, all the others disagreed and had their reasons. If this diagnosis of a probable extra-uterine fetation had been made early, before the accident, then when the acute symptoms supervene a quick diagnosis could have been made as to the cause of the pain. He described a fold of peritoneum found behind the uterus, and as the clot had the appearance of different

ages, portions being yellow, he suggested that an extra peritoneal hemorrhage had first occurrence under this fold perhaps ten days before the intra-peritoneal hemorrhage, which was the cause of death.

Dr. Beates exhibited, for Dr. Boardman Reed, of Atlantic City, N. J., a tumor of the uterus which the latter supposed to be an early stage of carcinoma, but no microscopic examination of the specimen has been made.

Dr. Beates reported the case of an infant which appeared well and hearty at birth, but died in collapse on the third day. An autopsy revealed acute gangrene of the mucous surface of eight feet of the ileum, hemorrhage had occurred into the intestine and was the immediate cause of death.

W. H. H. GITHENS, M.D., Secretary.

Abstracts and Selections.

I.—OBSTETRIC.

Delivery Prevented by an Enlarged Spleen in the Child.—A report of this singular case appears in the *Medical Press* as follows:

A well-formed native woman, æt. 20, was delivered of her first child, under the care of the Civil Surgeon of Dinagepore (India). Throughout the entire period of gestation she had suffered a good deal from malarious fever, the attacks recurring three or four times in each month until the seventh, when severe hæmorrhage came on. This prostrated her very much, and she remained weak until delivery at the usual period. Dinagepore is considered, amongst the servants of Goverment, as one of the three penal settlements of Bengal, owing to their malarious climate, Rungpore and Purneah, being the other two. Considerable difficulty was experienced in the delivery. The patient had been in labor several hours when the Civil Surgeon saw her. The head was then protruding much beyond the external outlet. The labor pains had ceased, and the child was evidently dead. The face was livid and partly decomposed. The Civil Surgeon rectified the position with facility, brought the shoulders round, and hooked down the arms with his fingers. Steady traction was then made for two or more hours without any advance. At this time the head became detached. The woman was then placed under chloroform, and podalic version was performed. Still no delivery. On examination the abdomen was found to be distended with, apparently, an enormous and hard tumor. It was decided to, if possible, break it up. This was done. Two fingers of the left were introduced, and a guarded scalpel, held in the right hand, was passed in, and made to perforate the child's abdomen. The finger completed the operation of breaking the tumor up into several pieces, which were extracted separately, and

with some little difficulty. When this obstruction was removed, the further delivery was readily accomplished. In eight hours the placenta came away. There was no flooding, and the patient made a complete, though slow, recovery. *The tumor was an enormously enlarged spleen.*

Rupture of the Vagina During Labor.—Dr. D. Berry Hart thus concludes a paper on this subject in the July issue of the *Edinburgh Medical Journal:*

1. During labor the uterine muscle exercises an upward tension on the cervix and pelvic floor segments.

2. The fœtal head exercises a dilating power on the cervix and pelvic floor segments, this dilating force acting at right angles to the long axis of the cervix and vagina.

3. The vaginal walls are constructed so as to bear longitudinal tension and eccentric strain. This is provided by the rugæ and felted structure of the vagina.

4. The anterior vaginal wall, from its close incorporation with the urethra and loose union with the bladder, is the strong wall.

5. The posterior vaginal wall is structurally weak at its upper half inch, is more elongated during labor than the anterior one, and therefore :

Rupture of the vagina is most common where the posterior vaginal wall is covered by peritoneum, and when it occurs is a tension tear like cervical rupture.

The precise conditions under which such a vaginal tear happens will vary with each case. The preponderance of the frequency of cervical over vaginal rupture is marked, and is due in part to the head entering the cervix first. Finally, it is evident that a knowledge of the force necessary to tear this part of the vaginal wall would give us a force under that necessary to complete a full-time labor.—*Med. and Surg. Reporter.*

II.—GYNECIC.

On the Operative Treatment of Uterine Fibro-Myomata.—A paper read at the Obstetric Section of the British Medical Association by J. Knowsley, M.B., C.M., and published in the *British Medical Journal.*

The subject of the surgical treatment of uterine fibro-myomata has been so much discussed during the last few years, that it is difficult, nay, impossible, to approach it without going over old ground. I propose, therefore, simply to place before the members of the Association my own experience, and the views which have been founded upon it. In so doing, I do not forget that what I have seen, heard, or read of the experience of others, has probably helped to form my present views. The object of my paper is, however, simply to invite discussion; to attempt

an exhaustive criticism of a subject of this magnitude would be obviously absurd. The absence of reference to the works of others is, therefore, not due to want of appreciation, but to want of time and space.

As we are only to consider the surgical treatment of these common growths, we can dismiss at once the great majority of cases, with the remark that more than half the patients who are the subjects of them would never suspect their presence, but for the chance discovery of a painless lump in the abdomen, or for the statement of their medical attendants that they have a tumour. Whatever the future success of surgery in the treatment of these tumours, the great mass of cases require no treatment at all, or merely such slight palliatives as may be best left to the physician to administer. I am, at any rate, one of those who, fully recognizing the benefit which the surgeon may confer upon certain extreme cases, still strongly object to operative interference in ordinary cases. I fully agree with Dr. Keith, who says, in one of his published papers, "the cases that do well are those which ought not to have been operated upon," or words to that effect. I would adopt the usual classification, because I believe that it is not only more anatomically and pathologically correct, but also more practically useful from a surgical standpoint, than any other which has been suggested.

1. *Subperitoneal Fibro-Myomata.*—These may be single or multiple, pediculate or sessile. They rarely occur alone, but are more generally accompanied by intra-mural growths, or general enlargement of the uterine wall. When they do occur alone, they seldom lead to the necessity for operation, but they may do so in certain exceptional cases. If single and pediculate, they may be removed with as little or less danger than that which attends a simple ovariotomy. Such operations are purely operations of expediency. The small amount of danger attending them would render them more often justifiable, were it not for the fact already alluded to, that these outgrowths are frequently accompanied by intra-mural growths; and it is often impossible to make a perfectly certain differential diagnosis as to the presence or absence of these accompanying intra-mural growths. If multiple and pediculate, they may still be removed with but little danger; but the same or increased difficulties in accurate diagnosis present themselves, and the presence of intra-mural growths may either lead to an imperfectly curative operation, or to the performance of a much more dangerous one than the patient and her friends had been led to expect.

2. *Intramural Fibro-Myomata.*—These may also be single or multiple, and are more apt to give rise to a combination of symptoms, which justify surgical interference. I would include in this group those general enlargements of the uterine wall which we frequently meet with, because it is often quite impossible to distinguish between multiple intramural

growths and this general enlargement, and also because the same surgical treatment is suitable for both conditions.

3. *Submucous Fibro-Myomata.*—These, again, may be single or multiple, and may be complicated by the presence of either of the other varieties. Usually, however, it is a single growth which makes itself so obnoxious, that it calls for surgical interference. When this is the case, rapid dilatation by means of Hegar's wooden dilators, and immediate enucleation, is the plan which I advocate. I always take the precaution to thoroughly cleanse the vagina, and, if it be possible, the uterine cavity, also, by antiseptic irrigation, before I commence dilatation; and, after the removal of the growth, I thoroughly sponge out the wound and uterine cavity with pure tincture of iodine, before using perchloride of iron, if that should be necessary to arrest hemorrhage. Since adopting the rapid dilatation and the free use of iodine, I have never had the smallest anxiety after enucleation.

It will often happen, however, that after the successful removal of a submucous growth, which one hoped was single, another or others will present themselves, and they may slough as the result of the first operation, and give rise to much trouble and anxiety. I am, therefore, more and more inclined to abandon the vaginal treatment of these cases, unless it is quite clear there is only a single growth, or unless the growth has already so thinned or destroyed the mucous membrane before the patient seeks advice, that it has left one no choice. I shall allude to this subject again, when speaking of the removal of the uterine appendages, or perhaps I may as well say at once that I believe the majority of this class of cases are better treated by this latter operation, certainly so if the growths are multiple.

Having thus briefly noted the chief varieties of growth, I will return to class 1. We occasionally, but rarely, meet with large pediculate, subperitoneal fibroids, which we are able to diagnose as such. I think that, if in any such case we can be quite certain of our diagnosis, and can define a fair pedicle, we are justified in recommending the removal of the tumour, even though it may only cause inconvenience at the time our opinion is asked. I have already pointed out that the operation is one which is easy of performance, and attended with little risk, and very likely it is a matter of much moment to the patient to get rid of the unsightly swelling. I have recently operated in such a case with perfect success; the lady was a young governess, and her size was a very serious inconvenience to her, and threatened to deprive her of her calling in life, from the unkind suggestions it called forth. I have operated twice before under similar circumstances, and all three patients have recovered without trouble of any kind. In each case, one large and main tumour was removed, and from one to three smaller outgrowths, and a healthy uterus was left benind. In one case, I found a small cystic tumour of

the left ovary, and removed it also. The pedicle of these growths may be treated by the cautery, the *serre-nœud*, or the silk ligature. I much prefer the latter, but will give one caution as to the method of applying it. If the pedicle be transfixed, as in ovariotomy, hæmorrhage from the puncture is very liable to occur, and very difficult to control. I therefore first secure the pedicle by a ligature tied firmly round the whole of it · then threading an end of this ligature through the needle again ; transfix the pedicle on the distal side of the first tie, and proceed to ligature in halves, or smaller pieces if necessary. This method renders slipping of ligature, or hemorrhage from puncture, impossible.

Still keeping to the question of subperitoneal growths, I would ask, Are we ever justified in operating when the growths are sessile? I think we do occasionally meet with cases in which, without sufficient gravity of any one symptom to justify operation, the aggregate sufferings of the patient from free loss of blood (not serious hemorrhage), pain, and inconvenience from size and pressure on other organs, are sufficient justification. I have operated three times on such cases, and have again preferred to deal with the cut surfaces to ligatures and sutures. One of the three died, however, from recurrent hemorrhages. The wire *serre-nœud* is out of court for such cases, and I do not believe that the cautery would answer any better, ; the raw surfaces are often very extensive, and the tissue too contractile for its use. I shall refer to this class of cases again, when speaking of the removal of the uterine appendages.

I have omitted fibro-cysts of the uterus from my classification, because I think they may be much better studied along with ovarian tumours, with which they have greater affinities, both as to certainty of growth and danger to life. I may, however, mention that I have operated five times for uterine fibro-cyst, and all the cases have done well. One was treated by the Well's ovariotomy-clamp, two by enucleation and ligatures, one by cautery and ligatures, and one by simple transfixions and ligatures. The weights of the tumours, with fluid contents, were respectively 62 pounds, 8 pounds, 4 pounds, 23 pounds, and 6 pounds.

We have now to consider class 2, the most important of all in the present connection, because it is the intra-mural fibro-myomata which most often lead to the necessity for the greater surgical operations. Operations for the removal of such growths by abdominal section are, however, far more serious and dangerous than those we have been considering. In the present class of cases, the operation nearly always involves the opening of the uterine cavity, and we are at once exposed to the risks of septic conditions. The result is seen in an immensely increased mortality—a mortality still so great that we must pause here, and carefully consider what are the conditions which justify us as surgeons in performing these formidable hysterectomies and partial hysterectomies. There can be no doubt that, since it has been generally recognized that

operations in which the uterine cavity is opened should be concluded by bringing all the cut surfaces outside the peritoneum, the mortality has sensibly decreased; but it is still far too heavy for these operations to take rank along with ovariotomy, even if the diseases for which they are undertaken were as certainly deadly as ovarian tumor. Those operations involving the opening of the uterine cavity should not, in my opinion, be undertaken unless the life of the patient is actually in danger from hemorrhage, rapid growth of tumour, or interference with the function of the bowel or other vital organ. I trust that one outcome of this discussion will be to reveal the true mortality of these formidable operations, and check their too frequent performance.

There are two methods which aim at the same end—viz., the complete exclusion of wounded surfaces from the peritoneum. One method is by suture, the raw surfaces being turned into the uterine or cervical cavity, the other is by some form of clamp or *serre-nœud*, the raw surfaces being brought out between the lips of the abdominal wound. Both methods have their advocates; and the former may sometimes be adopted, when it is impossible to apply clamp or *serre-nœud*; but I have no hestation in strongly advocating the use of the *serre-nœud* (Kœberlé's is a very good one) as the safer and better plan of the two. I have performed partial hysterectomy three times, and all the patients died. Once I used the Well's ovariotomy-clamp, and it caused a slough which extended in the walls of the uterus, and caused death by septicemia; then I tried ligatures and sutures of the flaps, and the patient died of septicemia; then I tried simple ligatures applied by transfixion, and the patient also died of septicemia. I shall not again in any case attempt a partial hysterectomy, as I am convinced that it is both safer and easier to remove the whole organ, and deal with the cervix, instead of the uterine wall.

I have performed complete supravaginal hysterectomy twelve times, on each occasion removing both ovaries. The first three cases were treated by transfixion, ligature, and dropping of the cervical and ovarian pedicles. The first recovered; and the other two died—one of septicæmia, and one of hemorrhage from slipping of one of the ovarian arteries. The next case I treated by Well's clamp, applied so as to include the cervix and both ovarian pedicles. She made an excellent recovery. In the next case, I was obliged to use ligatures; and, after a good deal of fever and trouble, she made a good recovery. Then came a hopeless case, in which the bladder was opened, and an enormous tumour enucleated, vessels being tied where they bled. She sank in a few hours. Then came two cases in which I was able to use Kœberlé's *serre-nœud*, and both made good recoveries. Then came one in which I did not intend to perform hysterectomy, but got such hæmorrhage from a tear in removing adherent appendages, that I was obliged to go on and remove the uterus. I used the *serre-nœud*; but it was impossible to bring the

stump up into the incision, and I attempted, by sewing the peritoneum round it, to make a half intra- and half extra-peritoneal arrangement. I have once again attempted this plan, and both cases have died of septicæmia; so that, if ever I find myself in like difficulties, I shall remove the wire, and use ligatures and suture of the flaps.

In two other cases I have used Kœberlè's *serre-nœud*, in one removing a large ovarian tumour along with the fibroid uterus; and both have recovered. I have, therefore, twelve cases of complete hysterectomy, with seven recoveries and five deaths; and I have a total of thirty-one operation for uterine tumor of one kind or other, with ten deaths. These are not satisfactory figures; and, if I saw no hope of improving them, I should be compelled to admit that I thought it better to abandon the operative treatment of these tumours, except in cases in which life was in immediate danger. We must remember, however, that my experience extends over a period of seven years, and that the chief mortality occurred in the earlier cases. Since the extraperitoneal treatment bas been adopted whenever possible, results have improved; all my cases in which it was possible to bring both the uterine and ovarian stumps into one clamp or *serre-nœud* outside the wound have recovered. Unfortunately, some of the cases which most urgently call for operation are unsuitable for any really satisfactory extraperitoneal method.

I will now turn from what may be called the direct surgical treatment of uterine fibro-myoma to the indirect method, in which we obtain a gradual cure by the removal of the uterine appendages. If I have drawn a somewhat gloomy picture of results and probable results of hysterectomy, I am glad to be able to give a silver lining to the cloud. I believe that there is a great future before this operation of removal of the appendages for the cure of fibroid—a future so free from mortality, and so satisfactory in its after-results, that we shall eventually be justified in performing the operation in a far larger number of cases than we could ever have hoped to justify in the more dangerous operations which we have been considering.

I feel sure that, with a little more experience, we shall be justified in recommending the removal of the appendages in cases which are troublesome from hemorrhage, pain, etc., before they grow large enough to raise the question of the more dangerous operations. My experience has at present been limited to fifteen cases; but I have selected them with care, not only as cases likely to be cured by the operation, but as cases which, from their variety, would demonstrate its scope. All the fifteen patients have recovered; ten have entirely ceased to menstruate, and have entirely lost their tumors; one still has some irregular menstruation, but the tumor is a third of its size at the time of operation, and, from its condition, I feel certain will soon disappear; one has had no return of menstruation, and the tumor is going fast, but it is yet too early to expect its

disappearance; one has continued to menstruate, and the reduction in size is not very marked, but she no longer floods and she has lost her pain. In this case, I removed two cystic tubes, and was unable entirely to remove one of the ovaries. Two other cases have been operated upon too recently to speak of with any certainty as to the future, but they both promise well.

I would remark here that the case to which I have just referred, together with one in which I removed both tubes for pyo-salpinx, and left both ovaries, seem decidedly opposed to the notion that the tubes influence menstruation. The tubes were thoroughly and closely removed in both cases; but in one about two-thirds of one ovary was left, and in the other both ovaries were left, and both patients continue to menstruate regularly. In calling attention to this fact, I am, however, far from wishing to imply that I consider it a matter of no moment whether the tubes are removed or not. I believe that, in order to obtain good results, not only must the ovaries and tubes be thoroughly removed, but they must be removed in such a way that the blood-supply to the uterus is very materially influenced by their removal. In other words, the ligatures which transfix the broad ligaments must be so applied as, not only to enable us to cut the ovaries and tubes away safely, but, at the same time, to cut off from the tumor the very important blood-supply which it obtains from the enlarged ovarian, tubal, and other vessels.

My own small experience has brought out strongly the practical fact, that tumors with pelvic adhesions, and enlarged uterine arteries, though they do in time disappear after the removal of the appendages, are slow in doing so. The cases which respond most quickly to the operation are those in which the whole uterus is uniformly enlarged, and they are also the cases which grow most rapidly, suffer most pain and loss of health, and often flood terribly.

My paper is, I fear, already too long for one which is simply intended to invite discussion; but I must briefly record the reasons which have induced me to remove the appendages in the fifteen operations I have performed.

The first was hemorrhage; the second, rapid growth of multiple sessile fibroids in a young servant girl; the third, fibro-cyst of the uterus so involving even the cervix that Freund's was the only other possible operation—I opened the cyst, and left it to drain into the peritoneum; the fourth, fifth, and sixth were for hemorrhage and pain; the seventh was commenced as an exploratory operation, a soft fibroid growing rapidly, and thought possibly to be a recurrence in an old ovarian pedicle; the eighth and ninth, for hemorrhage; the tenth, for rapidly growing intramural growths in a patient with phthisical history and tendencies; the eleventh and twelfth, for hemorrhage and pain; the thirteenth for life-

long invalidism from multiple tumors, blocking the pelvis and extending high up into the abdomen; the fourteenth, for small fibroid with intense menstrual suffering (membranous dysmenorrhea); and the fifteenth also for a small fibroid and ovarian pain, causing permanent invalidism. In several of the cases, cystic ovaries or tubes, or both matted together, were encountered, and in some the adhesions made the operations very difficult.

I think the credit of suggesting the operation belongs to Hegar; but we must undoubtedly award to Mr. Lawson Tait the merit of establishing it in this country. I only wish that he had stuck to Listerism; and then, I think, he might have had the satisfaction of recording with me an unbroken series of successes, instead of having to admit, in his paper recently read before the Obstetrical Society of London, a mortality of 5.5 per cent.

I attribute my large mortality in hysterectomy, as compared with that of ovariotomy (under 4 per cent.), and that of removal of the uterine appendages for fibro-myoma, hydrosalpinx, or pyosalpinx, ovarian pain, etc. (*nil*), as entirely due to the fact that, in the majority of the former operations, it is impossible to carry out strict antiseptic or aseptic surgery.

In conclusion, I would strongly urge that hysterectomy should be reserved for those cases which have, before they are seen by the surgeon, passed beyond the reach of the safer operation of the removal of the uterine appendages; the size of the tumor being our guide. There will thus remain a legitimate, though limited, field for complete hysterectomy; but I am certain that its death-rate will exceed that of ovariotomy by as much as that of the operation for the removal of the appendages should fall below it. I am also prepared to maintain that, while strict Listerism will give us perfect results in the removal of the appendages, it is to the perfecting of our antiseptic precautions that we must look for improved results in hysterectomy.

Subcutaneous Ligature of Ulcerating Epithelioma.—In a case of repeated and exhausting hemorrhages from an ulcerating cancer of the mammary gland, Prof. Nussbaum applied a subcutaneous ligature, drawn so tightly as to strangulate the growth. The bleeding was at once arrested, but the effects upon the malignant growth were remarkable; it shrunk to one-fourth of its former size and began to cicatrize. The same principle, by another method, was subsequently carried into operation. The base of an ulcerating epithelioma was girdled by an incision through the skin, made with the thermo-caustic knife. The object attained in each case was a partial interruption of the arterial and nervous supply to the affected area, and the progress of the patients was so satisfactory

as to call forth Prof. Nussbaum's approval and endorsement. He recommends a more extended trial of this method, especially where there is bleeding.—*Medical Times.*

III.—DISEASES OF CHILDREN.

Management of "Summer Complaints" in Children.—By C. Barlow, M.D., Eaton, Ill., in *The Medical Age.*

Few subjects demand more attention than that of the summer complaints of children, as there are no diseases so prevalent and so fatal during the summer months. My practice is mainly in the country, where they are not so prevalent nor so fatal as in cities. They nevertheless prevail to a sufficient extent to demand our earnest attention.

I believe much can be done by physicians to prevent these bowel complaints; and as the preventitive treatment is of prime importance, it should receive special consideration. To this end, the etiology of these affections must be revealed. I believe it is generally conceded that continuous high temperature, for a number of days and nights together, is their chief cause. There are some who believe in their malarial origin, or that they arise from inhalations of an atmosphere loaded with noxious vapors and gases arising from vegetable decomposition, or from overcrowding, as in tenement houses in cities. Others argue that alternations of heat and cold are more productive of bowel complaints than continued heat; and still others, that they are caused by vegetable diet, without taking time, evidently, to consider the fact that these patients do not eat vegetables. That alternations of heat and cold are not a sufficient cause we have ample proof in our own climate, where we sometimes have all kinds of weather within twenty-four hours without these affections. The notion that malaria, noxious vapors or gases cause them to develop, does not preclude the theory that continued high temperature will cause them, as the latter is also produced by high temperature.

In New Orleans where the days are very hot in summer and the nights very cool, there are not more than one-third as many deaths from "summer complaints" in proportion, as there are in most of our northern cities; and this in spite of the fact that New Orleans is known to be a very unhealthy city. In San Francisco there is little development of these diseases. It is only where we have a continuous high temperature day and night, and in densely populated localities, that "summer complaint" prevails to an alarming extent.

The fact that it prevails mostly in the months of July and August is a good argument in favor of the above proposition. That dentition is not necessarily an exciting cause, is evident from the fact that as many children cut teeth in winter as in the summer. During the past five days I have treated ninety-nine cases of infantile diarrhœa, including simple di-

arrhœa, entero-colitis and cholera infantum. Four of these terminated fatally. The following summary shows the number of cases treated in each month of the year: January 9, February 2, March 3, April 5, May 4, June 5, July 23, August 25, September 20, October 6, November, 5, December 1. It will be seen that sixty-eight of these cases occurred during the hot months, and all the severe cases occurred during these months. The cases that came up earlier and later in the season were all cases of simple non-inflammatory diarrhœa and none of them were protracted beyond a few days.

Prophylaxis.—The old adage "that an ounce of prevention is worth a pound of cure," is just as true now as when first spoken. We can do a great deal toward preventing the development of these diseases, by instructing parents how to manage their children during the hot months. If infants are bottle-fed they should have pure milk, and have it prepared so it will resemble mother's milk as nearly as can be. Purity of atmosphere should be secured by thorough ventilation, and there should be windows enough in the apartment to make it light. During the hot weather there should be no cooking done in the room where these children are kept, nor in the adjoining room. Every family, especially in the country, can have a temporary summer kitchen, detached from the main building, in which to do the cooking, and thus prevent overheating the dwelling house. The heat generated by a stove is just as injurious as the intense summer heat; and it should be avoided as much as possible. A sufficient number of shade trees around dwelling houses do much toward cooling the atmosphere, besides furnishing a cool place for the children to play in. The dress should also be attended to. A very thin flannel shirt of sufficient length to cover the abdomen is advisable, and besides this a thin gown is all the clothing needed. In order to keep blood cool children should be given a cool bath morning and evening. And I believe this to be of the greatest importance. I believe that by a strict adherence to these rules, in the country, where the air is pure, bowel complaints can be almost if not entirely prevented.

Treatment.—In some cases small doses of mercury with chalk were given in the first stage, combined with opium and bismuth, which latter remedies formed the main treatment in many cases. Simple cases did well on laudanum, catechu and chalk mixture. I also used the pulv. creta comp. c. opio with excellent results. In protracted cases I used aromatic spirits of ammonia with bismuth, simple syrup and water. I also gave lactopeptine with good results. Quinine was given to nearly all of these patients. To those under two years of age it was given by inunction in the axilla and sometimes over the abdomen. I usually ordered the abdomen bathed with turpentine three times a day. In some cases I used warm fomentations over the bowels with very good results, but the most obstinate cases progressed more rapidly when cold applica-

tions were used; and in many cases I believe them to be of great service. Diet and proper hygienic management were always attended to.

Infantile Leucorrhea.—A Clinical Lecture by Professor T. Gaillard Thomas; published in the *Med. and Surg. Reporter:*

The little girl, nine years old, whom I first bring before you, is suffering from a very profuse leucorrhea, which, her mother informs me, she has been unable to cure by any of the remedies which she has employed, and which has now lasted for two months. I, of course, made a vaginal examination, and, on separating the labia, I found that the whole vulva was about the color of red flannel, and bathed with a copious leucorrheal discharge. The meatus urinarius was also seen to be in the same condition, and urethritis has, no doubt, been set up by the spreading of the irritation. If it had been necessary, I could have introduced a small glass speculum into the vagina; but this was not required to make a diagnosis, as I saw exactly what was the matter without resorting to this.

Not infrequently mothers will bring their little girls to you in this condition, and they will sometimes be in a state of great agitation, because they are afraid the trouble has been the result of injury done the children. There is ordinarily no reason whatever to suspect anything of the kind, and you can at once quiet the anxious mother's mind. The affection is a perfectly simple one, and is perfectly curable also. What is it then? It is generally known as infantile leucorrhea; but infantile vaginitis would be a better term for it.

Now as to its causes. One of the most frequent of these is neglect of hygienic precautions. There is generally no intentional neglect on the part of mother or nurse; but, on account of the undeveloped condition of the part, an accumulation of hardened secretion sometimes collects in the same way as that which not infrequently gives rise to balanitis in the male child. Another common cause is the depreciated condition of the child's system, such as that due to spanæmia, in which all the mucous membranes are apt to become more or less affected. Thus, there is often gastric and intestinal, as well as nasal catarrh. A third cause that may be mentioned is reflex influence from the rectum. The cause of the irritation in the rectum is usually ascarides, and an afflux of blood to the part is caused by the itching and irritation.

In some instances, the ascarides, by getting into the vagina itself, are the direct cause of the trouble. The prognosis of this affection is, that it can be cured at once if it is properly treated.

In the treatment, the first thing to do is to see if there are any worms present, and if so (or there is any reason to suspect that such is the case), use an injection of warm salt water, as this form of ascaris (the *ascaris vermicularis*), as well as others, is unfavorably affected by salt. The next thing to do is to get the child's general system in the best condition

possible by appropriate food, iron, vegetable tonics, and the hypophosphites. It is better to depend on nourishing diet, however, than on medicinal agents. If, after the worms have been gotten rid of, the vaginal irritation and discharge should continue, or if no worms should be found present, local treatment will be required. The vagina should be thoroughly washed out by means of a syringe provided with a small nozzle, which ought to be well oiled before being introduced. In order that the canal may be perfectly cleansed, the child should be placed upon the back. In some cases the mere removal of the accumulated secretion, which is a constant source of irritation, is all that is necessary; but if the trouble has gone on for some time, this may not be sufficient. Something further is then needed, and one of the best applications to use is the old-fashioned black wash (calomel and lime-water) in the strength of one ounce to a pint of water. Before using this (which should be done twice a day) an injection of simple warm water should be made. I have never yet seen a case of infantile leucorrhea that could not be cured by such treatment as this; so that there is no necessity of resorting to astringents and nitrate of silver, which may perhaps do harm. If it is adopted here, I have no doubt that in less than two weeks this child will be entirely well.

But there is one mistake which is apt to be made by the physician in these cases, on account of which a much longer time may be required for a case than is at all necessary, and that is, the failure on his part to show the mother or nurse how to introduce the nozzle of the syringe properly. Mothers, unless they are especially instructed in regard to this point, never carry the nozzle more than an eighth of an inch up into the vagina, and as it is above this that the degenerating pus is found, there will be no improvement, simply because the injections fail to reach the real source of trouble. It is not enough even to show the mother how to use the syringe, but you should also watch her do it, and see that the upper part of the vagina is reached. In a child of this age, the rectal tube of a Davidson syringe should be employed.

Infant Foods.—Prof. Albert Leeds, Ph. D., read before the Philadelphia College of Physicians and Surgeons, May 2d, 1883, an exceedingly interesting and valuable paper on the subject of Infant Foods, of which the following is his conclusion:

1st. Cow's is in no sense a substitute for woman's milk.

2nd. Attenuation with water alone is inadequate, and chemical metamorphosis, or, mechanically, the addition of some inert attenuant is required, in order to permit of the ready digestibility of cow's milk by infants.

3d. The utility of manufactured infant's food is to act as such attenuants, and as such they take the place of the simple barley and oat-meal

water, the sugar, cream, baked cracker, arrowroot, etc., etc., used in former times.

4th. The results of both chemical and physiological analysis are opposed to any but a sparing use of preparations containing a large percentage of starch.

5th. It is eminently probable that, besides acting as attenuants, the matters extracted in the preparation of barley and oat-meal water, and still more the solid albuminoid extractives obtained at ordinary temperatures (whereby coagulation is prevented), by Liebig's process, have a great independent value of their own. For this reason, instead of employing starch, gum, gelatine, sugar, etc., the use of a natural cereal extractive, containing saccharine and gummy matters and soluble albuminoids as well, such as our great and inspired teacher, Liebig, himself advocated, is in accordance with the developments of science since his time.

6th. The use of food made up of equal parts of milk, cream, lime-water, and weak arrowroot water, as practiced for years by the late Dr. J. Forsyth Meigs, and recently advocated by his son, Dr. Arthur V. Meigs, is sustained by theory, analysis and practice. It provides for the increase of fat to an amount comparable to that contained in human milk. It adds alkali to permanent recreation, and to convert caseine into soluble albuminates. It adds a little bland attendant. And if, in addition, the amount of milk-sugar were raised, and instead of arrowroot water, barley or oatmeal water were substituted, as the case demanded, it would approach, it appears to me, still more nearly to the conditions required.

7th. The perfect solution of the present problem is to be found in the modification of cow's milk by chemical processes, so as to make it physiologically equivalent to human milk. The nature of these processes, and the results to be obtained, are at present so nearly wrought out, that there is good ground for believing that such a solution of this problem is not far distant in the future.

Editor's Table.

THE REMOVAL OF THE SECUNDINES AFTER ABORTION.—For the past few months quite a heated discussion has been going on among the profession as to the proper mode of treating this stage of abortion. This debate was brought about by a short paper of Dr. Mundé endorsing the views advanced by Dr. Alloway. The following communication just received will explain the position of Dr. Mundé on this subject:

My Dear Dr. Stevens:—I have this moment read your remarks and

the discussion thereon in the October number of your valuable journal, and desire to express to you my appreciation of the fair and generous spirit in which you use your right to disagree with a part at least of my teachings on the "Treatment of the Secundines after Abortion." I had no idea when I wrote the short supplementary article to that of Dr. Alloway in the February, 1883, number of the *Journal of Obstetrics* that I was destined to stir up such a hornet's nest about my ears as has been the case in some sections, but I am always glad to draw out calm, dispassionate criticism, by experienced and competent observers, as was the case in the papers of Dr. Coles, of St. Louis, and yourself, and in the greater part of the discussions thereon. I admit that my short paper, intended chiefly to endorse Dr. Alloway's statement and position, and once for all to place myself on record as in favor of the *active* as against the *expectant* or *do-nothing* method, may have been too dogmatic, too sweeping in its teachings. I had so often in society discussions, printed or not, expressed my opinions on the subject, that I did not consider it necessary to go over all the details again, but merely wished to state my conviction that, *as a general rule, the secundines should be at once removed after an abortion, if this can be done without using too much force, that is, force sufficient to injure the woman.* I have been led by experience, a rather extensive one, to the conclusion that a woman is *never* safe from danger (from hemorrhage or septicemia) so long as the secundines, wholly or in part, remain in the uterus after an abortion. And almost daily experience confirms this conclusion. But to-day I was called to see a lady whom I saw in an impending abortion two weeks ago and whom I returned to the care of her family physician, who now informed me that she was still bleeding after the miscarriage which took place about two days ago, and that he suspected retention of a portion of the placenta, although he had been told that both fœtus and placenta had been completely expelled. I found the patient bleeding profusely, and with the dull curette removed a piece of placenta of the size of an almond, besides numerous shreds. I have no hobby to ride, my dear Doctor, in this matter. My honest conviction, based on a steadily increasing experience, forces me to the conclusion that immediate or early removal of the secundines, when feasible, is the safest and best method. It is not that I deny the *possibility* of safely leaving the secundines to nature; but the cases which I chiefly see are those in which the plan has been tried and found wanting, and hemorrhage or septicemia demand the active removal of the secundines without further delay. To avoid these possible ultimate dangers I advise early or immediate removal. But I do not for a moment claim that those who act differently may not be very successful—and very lucky, also.

In spite of the admittedly dogmatic character of my paper in the *Journal of Obstetrics*, I claim the privilege, and exercise it, too, when I

think proper, of choosing my cases, and that is what every conscientious physician ought to do. To emphasize that privilege, I took particular pains to qualify my rule of active (or "forcible", as I put it there perhaps too strongly) removal, by saying; "*in every case of abortion in which such removal can be accomplished without force sufficient to injure the woman.*" (Italics in the original; see page 144, bottom, and page 145, top, of February, 1883, number *Journal of Obstetrics*, that being the second page of the article.) But this clearly expressed and italicized statement my critics have conveniently overlooked; and even you, my dear Doctor, have apparently not noticed it. But this passage plainly shows that I am neither dogmatic nor exclusive in my rule of immediate removal.

I admit that it may be dangerous to inculcate into the minds of the young practitioner the habit of scraping out uteri with fingers or curettes in order to remove the remnants of an abortion. It certainly *is* dangerous if we do not tell them *when* and *how* to do this. The same would apply to the obstetric forceps. The way out of the difficulty, is to teach them this *when* and this *how*, and to put before them clearly the *possible* safety, but also the *probable* danger of leaving the secundines in the uterus after every abortion: and then let them decide in each individual case which is the greater risk, the expectant or the active policy.

While the gentlemen who joined in the discussion on your remarks, dear Doctor, treated me very fairly according to their own opinions, my friend Dr. Trush (with whom I have never conversed or corresponded on this subject) expresses my own sentiments so completely that I have but little to add to his remarks. Our differences on comparison would prove to be but of minor importance.

I had intended, my dear Doctor, writing you merely a personal letter of thanks for your friendly, if scientifically antagonistic, treatment of me. But I have run on at such length on this familiar, and to me now rather hackneyed, topic, that I fear I have wearied you. If you care to print this letter in your columns of correspondence, perhaps you may place my views in a little less dogmatic light before your readers than I have myself done in my original article, and thus do me a service, which I shall cordially appreciate. Very Faithfully Yours,

PAUL F. MUNDE.

20 West 45th Street, New York, Oct. 23, 1883.

P. S.—For an example of what I consider meddlesome and unwarranted curretting, I must refer you to an article by Dr. V. Weckbecker-Sternefeld, of Munich, abstracted in your October number, on "The Sharp Spoon in Gynecology." I took occasion to rebuke this unwarranted use of the *sharp* curette in a note to the *Centralblatt für Gynäkologie*, 31, Aug. 4, 1883, particularly where he most recommends it, the removal of the placenta at or before term. P.F.M.

By an unintentional oversight the report of the Eighth Annual Meeting of the American Gynecological Society published in our last issue was taken from the *New York Medical Journal* without the usual credit. That journal will accept our apology. In such matters we are extremely particular, and all the more regret such an occurrence when it takes place.

At the annual meeting of the Washington Obstetrical and Gynecological Society, held October 19, 1883, at Washington, D. C., the following officers were elected for the ensuing year: President, Dr. S. C. Busey; Vice-Presidents, Drs. W. W. Johnston and J. Tabor Johnson; Recording Secretary, Dr. C. H. A. Kleinschmidt; Corresponding Secretary, Dr. Samuel S. Adams; Treasurer, Dr. G. L. Magruder.

Committee on Business—Drs. Prentiss, C. E. Hagner, and S. S. Adams.
" " Admissions—Drs. Fry, McArdle, and Johnson.
" " Publications—Drs. Smith, Kleinschmidt, and McArdle.
" " Pathological Specimens—Drs. Johnston, Acker and G. B. Harrison.

IN MEMORIAM.

James Marion Sims, M.D.—The sudden death on the morning of November 13th, of the distinguished surgeon, J, Marion Sims, was a shock to every one. Although lately he had not been in robust health, no one had reason to believe that his valuable life might not be spared for many years. Reaching the age of three score years and ten, he had a remarkably young appearance, and with a good claim for longevity, he was often heard to say that he expected to see his ninetieth year. Up to the last he was active, ardent and laborious. Death was the result of heart-failure, attendant upon atheroma of the coronary arteries and fibrous myocarditis.

Dr. Sims was prostrated by a very severe attack of pneumonia three years ago, and he sank so low in that illness that his family and physicians thought for awhile that he would die. He rallied, however, and recovered almost entirely, as it seemed, from the attack. The piercing cold weather of fall and winter in this climate was more than could endure, and he arranged to spend his winters in Italy. He was to have sailed for Europe, with his family to-day, en route for his Italian residence. He had even planned to sail a week ago, but was prevailed upon to stay and perform an important operation. He said on Monday that he had not felt so well in a year, and was in the best of spirits. In the evening of the same day, with his son, Dr. Henry Marion Sims, he attended a patient, and on his return sat down to write on his autobiography, about one-half of which he had finished. He complained of a

little pain over his heart, but continued to write. He retired, but was restless during the night, and shortly before 3 o'clock on Tuesday morning he turned up the gas and wrote for a time in bed. A little later his wife noticed that he was breathing in a peculiar manner and hastened to call his son. When Dr. H. Marion Sims reached the bedside, his father gave one short breath and expired at 3:15 A.M., November 13th.

Dr. Sims was born in Lancaster District, South Carolina, on January 25, 1813. His education began in the common school, and he was graduated from the South Carolina College in 1832. After studying for a short time at Charleston he entered Jefferson Medical College, Philadelphia, completing the course in 1835. He began practice in the following year at Montgomery, Ala., making a specialty of gynecology, though he also became known for his skill in general surgery. In 1845 he published a series of papers in the *American Journal of the Medical Sciences*, developing an original theory of trismus nascentium. About the same time he began a series of experiments in the treatment of vesico-vaginal fistula, and, after four years, perfected a method of curing a disease that had been thought incurable, by the substitution of sutures for those of silk thread then in use. In 1853 he came to New York, and, in addition to building up a lucrative practice, succeeded in establishing a hospital for women. The institution was at first supported by private contributions, with a grant of $2,500 from the Common Council, but in 1858 a charter was obtained from the Legislature, and the city gave the land at Forty-ninth Street and Lexington Avenue upon which to erect the pavillions, with an appropriation of $10,000. After a study of hospital architecture in Europe he decided to have the hospital built in pavilions. The first pavilion was ready for the reception of patients in 1866, and, unlike most philanthropists, Dr. Sims lived to see the institution which he founded surpass even his own expectations in importance and usefulness.

Dr. Sims' reception in Europe was of the most cordial and flattering character. By special invitations he operated in several of the great hospitals in Paris, Brussels, London, and Dublin, and his extraordinary success elicited the warmest praise from some of the most eminent practitioners in Europe. He was greeted in many places as one of the greatest surgical discoverers and operators of the age. The French people were especially impressed with him, and the French Government conferred upon him the order of Knight of the Legion of Honor. Honors were also paid to him by the King of the Belgians, and subsequently he was decorated by the Italian, Spanish, and Portuguese Governments. Dr. Sims took his family to Europe in 1862, and spent a large part of his time there during the next six years. In 1870 he returned to Paris from New York to visit his family, which he had left abroad. When the Franco-Prussian war broke out Dr. Sims was induced to take charge of the Anglo-American Ambulance Corps as surgeon-in-chief. This

was the first ambulance corps to arrive at Sedan, where it rendered services of incalculable value, and the fame of Dr. Sims was greatly enhanced by the heroism, energy, and remarkable skill displayed by him. He was the oldest man who left Paris in the ambulance service. Dr. Sims built up a large practice in France and Belgium, where his services were in constant demand among people of wealth and high social standing. His genial manners and magnetic social qualities made him very popular abroad as well as home.

The subject of this sketch was, during his life-time, elected an honorary member of scores of medical and scientific societies in every part of Europe and in every part of this country. In 1875 he was elected President of the American Medical Association. He was a member of the County Medical Society, of the Pathological and Surgical Societies, the Academy of Medicine, and the Neurological Society. Dr. Sims' most important literary works are "Trismus Nascentium," "Silver Sutures in Surgery," "Clinical Notes on Uterine Surgery," "The Microscope in the Sterile Condition," a "History of the Discovery of Anæsthesia," "Treatise on Ovariotomy," "Intra-Uterine Fibroid Tumors," and his Centennial address before the American Medical Association in Philadelphia, June 6, 1879.

During the past two years Dr. Sims spent a couple of months of each autumn in this city, the winters in Rome or Nice, and the remainder of the year in Paris and other parts of France. During this time he has written many articles on surgical subjects. The funeral, which was largely attended, took place at 10 o'clock on Friday morning, in the Madison Square Presbyterian Church, of which the dead surgeon was one of the oldest pewholders.

The autopsy was made by Drs. W. H. Welch and G. L. Peabody. Present: Drs. A. L. Loomis, W. H. Welch, J. A. Wyeth, and W. Gill Wylie.

The heart was found to be somewhat enlarged, with adherent pericardium. The valves were competent. The calibre of each coronary artery was markedly narrowed by atheroma, which was partly calcareous. In the muscular tissue, at the upper part of the interventricular septum, there was a patch of fibrous myocarditis as large as a silver quarter of a dollar, with the beginning of an aneurismal pouch. There was a fibrous myocarditis in the papillary muscle, which controlled the anterior segment of the mitral valve. Both ventricles were dilated, and the left hypertrophied. The lungs were slightly congested and œdematous. The parietal and visceral pleura on the left side was everywhere adherent. The kidneys and liver showed lesions of chronic congestion. Brain normal. Some atheroma of internal carotid arteries.

We will add to the above notice from the *Medical Record*, that in 1878, Dr. Sims was elected President of the American Gynecological Associa-

tion, and in that capacity presided over its meetings in this city; being one of the original members of that Association.

At its last meeting he tendered his resignation, assigning his ill health as the cause of the desire to sever his connection with that distinguished Society. The Society however, declined to accept the resignation; a number of influential members insisting that the Society could not afford to loose so valuable a co-worker as Dr. Sims.

DEATH OF PROFESSOR DEPAUL.—On the 22d of October, Professor Depaul, the celebrated obstetrician, died at his native place, near Pau (Basses-Pyrénées.) He was a commander of the Legion of Honor, member and formerly president of the Academy of Medicine, and one of the committee of publication of *La France Médicale.* He was 72 years of age, and died of pneumonia.

Bibliography.

A Guide to American Medical Students in Europe. BY HENRY HUN, M.D., Lecturer on the Diseases of the Nervous System in the Albany Medical College, New York. Wm. Wood & Co., 56 and 58 Lafayette Place. 1883.

This little volume is a sort of guide book for students proposing to visit the various medical centres of Europe. An extract from the author's preface will give a fair idea of the plan or purpose of the book.

"Every year a large number of Americans go to Europe to complete their medical studies. Unfortunately the great majority of these students have very little definite information about the different universities or about the way medicine is taught abroad, and on this account they lose much valuable time in getting to work. The object of this book is to furnish this information, and to give some assistance to the student at the outset of his foreign study, which is the time that he stands most in need of aid."

The book gives all the particulars that the student wants of Austria, Germany, Switzerland, France and England. The book is written in an attractive style and will commend itself not only to those who go abroad, but also to the general reader who wants to know how medicine is taught abroad.

The Medical Students' Manual of Chemistry. BY R. A. WITTHAUS, A.M., M.D., Professor of Chemistry and Toxicology in the University of Buffalo, etc. New York: Wm. Wood & Co. 1883.

Perhaps there is nothing new in the teachings of this book, but every

author, and especially every teacher, has his own handy way of presenting the points of study. Prof. Witthaus has had a good deal of experience in teaching in chemistry and the student will find this book both excellent in matter, and pleasant for study. The whole subject is presented in an attractive manner—more than could be said my boy, when you and I were students thirty or forty years ago.

The Physiological Factor in Diagnosis. A Work for Young Practitioners. By J. Milner Fothergill, M.D., Physician to the City of London Hospital for Diseases of the Chest, etc. New York: Wm Wood & Co. 1883.

This book gives a careful outline of the general physical condition and appearance of the proposed patient. The whole study is different from usual works on pathology—but the reader will find the plan very readable, and certainly in the examination of cases very suggestive. We heartily endorse Dr. Fothergill's new book, and feel sure our readers will be grateful if we advise them to buy the book.

Hand-Book of Electro-Therapeutics. By Dr. Wilhelm Erb, Professor in the University of Leipzig. Translated by L. Putzel, M.D., Neurologist to Randall's Island Hospital, etc. Thirty-nine wood-cuts. New York: Wm. Wood & Co., 56 and 58 Layfayette Place. 1883.

This is the volume for June of the well-known library of "Standard Medical Authors," as issued for several years past by the well-known house of Wm. Wood & Co., and so often noticed in this department of the Obstetric Gazette. The physician who desires to be familar with the method of using the battery—its philosophy and management—cannot do so well as to get this book and read it carefully. So, too, the special cases where electricity may be supposed to be useful are fully and carefully detailed in this book, and yet the whole is compressed in very brief space for the amount of instruction.

The Treatment of Wounds, its principles and practice, general and special, by Lewis S. Pilcher, A.M., M.D, Member of the New York Surgical Society. With one hundred and sixteen wood engravings. New York: Wm. Wood & Co., 56 and 58 Lafayette Place. 1883.

This book (the volume for August of Wood's "Library of Standard Medical Authors) is devoted to a vey important branch of surgery—viz: the management wounds. It is divided in *two parts* as a matter of system; I, in general, II, special wounds. There is too much detail for such a notice as this, but the busy practitioner will find in this book enough to well repay its purchase. Indeed, we repeat what we have said several times, that no library investment pays so well as the continued series of Wood's Library.